SERVICE MANUAL

TotalCare®
Bariatric
Bed

From Hill-Rom

Product No. P1830A

For Parts or Technical Assistance **man299ra**
USA (800) 445-3720 Canada (800) 267-2337
International: Contact your distributor.

TotalCare® Bariatric Bed Service Manual

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Chapter 1 Introduction

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Purpose

This manual provides requirements for the TotalCare® Bariatric Bed normal operation and maintenance. It also includes a parts list (in chapter 5) for ordering replacement components.

Audience

This manual is intended for use by only facility-authorized personnel. Failure to observe this restriction can result in severe injury to people and serious damage to equipment.

Organization

This manual contains seven chapters.

Chapter 1: Introduction

In addition to a brief description of this service manual, chapter 1 also provides a product overview.

Chapter 2: Troubleshooting Procedures

Repair analysis procedures are contained in this chapter. Use these procedures to gather information, identify the maintenance need, and verify the effectiveness of the repair.

Chapter 3: Theory of Operation

This chapter describes the application of the mechanical, electrical, and hydraulic systems employed in this product.

Chapter 4: Removal, Replacement, and Adjustment Procedures

Chapter 4 contains the detailed maintenance procedures determined necessary in chapter 2.

Chapter 5: Parts List

This chapter contains the warranty, part-ordering procedure, and illustrated parts lists.

Chapter 6: General Procedures

Cleaning, preventive maintenance, and other general procedures are described in this chapter.

Chapter 7: Accessories

A list of additional products, that can be used in conjunction with the TotalCare® Bariatric Bed, is available in chapter 7. Installation procedures for these accessories are also included.

Typographical Conventions

This manual contains different typefaces and icons designed to improve readability and increase understanding of its content. Note the following examples:

- Standard text—used for regular information.
- **Boldface text**—emphasizes a word or phrase.
- **NOTE:**—sets apart special information or important instruction clarification.
- The symbol below highlights a WARNING or CAUTION:

Figure 1-1. Warning and Caution

  - A WARNING identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
  - A CAUTION points out special procedures or precautions that personnel must follow to avoid equipment damage.
- The symbol below highlights a CAUGHT HAZARD WARNING:

Figure 1-2. Caught Hazard Warning

- The symbol below highlights a CHEMICAL HAZARD WARNING:

Figure 1-3. Chemical Hazard Warning

- The symbol below highlights an ELECTRICAL SHOCK HAZARD WARNING:

Figure 1-4. Electrical Shock Hazard Warning

Acronym List

There are several acronyms associated with the TotalCare® Bariatric Bed. For a list of acronyms, see table 1-1 on page 1-6.

Table 1-1. Acronym List

Acronym	Definition
A/D	Analog-to-Digital
BPM	Bed Position Module
CPR	Cardiopulmonary Resuscitation
DPST	Double-Pole, Single-Throw
EEPROM	Electronic Erasable Programmable Read Only Memory
EPROM	Electronic Programmable Read Only Memory
ESD	Electrostatic Discharge or Electrical Static Discharge
FET	Solenoid Voltage Supervisor
FM	Footboard Module
FPGA	(Logic Control)
GCIM	Graphic Caregiver Interface (GCI)® Module
GDC	Graphic Display Controller
IFM	Intermediate Frame Module
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
LCD	Liquid Crystal Display or Liquid Crystal Diode
LED	Light Emitting Diode
LON	Local Operating Network

Acronym	Definition
MOSFET	Metal Oxide Semiconductor Field Effect Transistor
MUX	Multiplexer
NVRAM	Non-Volatile Random Access Memory
PACM	Power Assist Control Module
PAG	Amplifier/Indicator Board
PCB	Printed Circuit Board
PCM	Power Control Module
PED	Patient Exit Detection
PIC	(Microcontroller type)
PM	Preventive Maintenance
PWM	Pulse Width Modulation
RAM	Random Access Memory
RAP	Repair Analysis Procedure
SM	Scale Module or Siderail Module
SPI	(Standard Industry Communication Protocol)
UCM	User Control Module

Specifications

For the TotalCare® Bariatric Bed specifications, see table 1-2 on page 1-8. For operation and function of the TotalCare® Bariatric Bed, refer to chapter 1 of the *TotalCare® Bed System Service Manual* (man112).

Physical Description

Table 1-2. TotalCare® Bariatric Bed Specifications

Feature	Dimension
Height—from floor to top of articulating deck (bottom of mattress) in low position	19.0" (48.3 cm)
Height—from floor to top of articulating deck (bottom of mattress) in high position	38.0" (96.5 cm)
Minimum under bed clearance	4.25" (108 mm) 1.25" (31.8 mm) (IntelliDrive™ Transport System)
Minimum clearance between articulating deck foot section and the floor for any bed position, except the tilt-table and the chair egress positions with the foot section at 90°	2.0" (5.1 cm)
Overall width—siderails raised Overall width—siderails lowered Overall width—distance between casters	44.5" (113.0 cm) 42.0" (106.7 cm) 25.5" (64.8 cm)
Overall length	93.5" (237.5 cm)
Overall foot section width	28.88-29.13" (73.36-73.99 cm)
Fully extended length of the foot section from pivot to inside of the footboard	26.75-27.25" (67.95-69.22 cm)
Articulating deck length	81.75-82.25" (207.65-208.92 cm)
Maximum head elevation	75°
Maximum knee elevation	20°
Maximum foot elevation	85° down
Maximum foot retract	12" (30 cm)
Maximum Trendelenburg	15°
Maximum Reverse Trendelenburg	15°

Feature	Dimension
Maximum Emergency Trendelenburg	20°
Bed safe working load (patient and equipment)	500 lb (227 kg)
Total bed weight (maximum)	750 lb (340.2 kg)
Sleep surface weight	40 lb (18 kg)
Casters	6" (15 cm) diameter
Sleep surface length	85" (216 cm)
Sleep surface width	Primary 39" (99.1 cm) and foot 32" (81.3 cm)
Sleep surface thickness (head/seat)	9.5" (23 cm) at center (includes 2.5" (6.4 cm) step deck)
Sleep surface thickness (foot)	6.5" (16.5 cm)
Maximum scale weight	500 lb (227 kg)
Scale accuracy	1% of patient weight
Scale repeatability	±.1% 250 to 500 lbs (113.4 to 227.0 Kg)

Regulations, Standards, and Codes

UL Classification

The power supply cord of the TotalCare® Bariatric Bed is UL approved hospital grade.

Type of protection against electric shock = Class I

Degree of protection against electric shock = Type B

Degree of protection against harmful ingress of water = IPX0

Intermittent operation = 3 minutes on/30 minutes off

WARNING:
Do not use the TotalCare® Bariatric Bed with oxygen tents. Damage to equipment or personal injury can occur.

Use oxygen administering equipment of the nasal, mask, or ventilator type only. Do not use with oxygen tents.

Model Identification

For TotalCare® Bariatric Bed model identification see table 1-3 on page 1-10.

Table 1-3. Model Identification

Model Number	Description
P1830A	TotalCare® Bariatric Bed

Safety Tips

Bed Positions

Always leave the bed system in the **low** position when a patient is to be left unattended.

Siderails

Siderails are not intended to be used as restraint devices. Medical personnel should determine the appropriate use of siderails to ensure patient safety.

Observe tubes and cables closely during articulations. Always use good lines placement techniques, particularly as the head section rises.

Brakes

Always set the brakes when the bed system is occupied. Push and pull the bed system sideways to ensure that the brakes have engaged.

Brakes must be set during chair mode, patient egress, ingress, transfers, and when the system is occupied (except during transport). Brakes should be periodically tested when the bed system is left unoccupied.

Fluids

Significant fluid spills onto the system electronics can result in a hazard. If such a spill occurs, the system should be unplugged, removed from service, thoroughly cleaned, allowed to completely dry, and checked by service personnel.

1. Unplug the system from its power source.
2. Take care of the patient.
3. Clean the fluid spill from the system.
4. Have maintenance inspect the system completely.
5. Do not put the system back into service until it is thoroughly dry, tested, and determined safe to operate.

Electrical Safety

SHOCK HAZARD:
Take care to prevent damage to AC power cords. An electrical shock hazard exists. When a system is being cleaned it should be unplugged from its power source.

Establish policies and procedures to train and educate your staff on the risks associated with electrical equipment.

Lockout Controls (Hi-Lo, Head, Knee, Master)

To restrict a patient or visitor from operating the applicable patient controls, activate the lockout controls on the siderail controls.

Parts and Accessories

Use only Hill-Rom® parts and accessories. Do not modify the bed system without authorization from Hill-Rom.

Operating Bed/Surface Precautions

Do not use the electric system/surface configuration in the presence of flammable gas or vapors.

WARNING:
Do not use the TotalCare® Bariatric Bed with oxygen tents. Damage to equipment or personal injury can occur.

Use oxygen administering equipment of the nasal, mask, or ventilator type only. The TotalCare® Bariatric Bed is not to be used with oxygen tents.

Transport Mode

SHOCK HAZARD:
Take care to prevent damage to AC power cords. An electrical shock hazard exists.

The TotalCare® Bariatric Bed is intended to be used to transport patients with the foot end of the system forward. Prior to transport, properly store the power cords to prevent tripping.

Use only transport handles or footboard to move the bed during transport.

Make sure that the patient, equipment, and all lines are securely placed within the perimeter of the system. The TotalCare® Bariatric Bed is not intended to be used to transport a patient in the recline chair, chair, or chair egress modes.

Fully extended IV poles could impact doorways or ceiling fixtures. Lower poles prior to patient transport.

Plug the bed into an appropriate power source when transports are complete.

CAUTION:
Although a fully-charged battery is preferred, transport may be done when the battery charge is low. The bed should be reconnected to AC power to charge the battery as soon as possible.

Sleep Surface/Mattress

Do not use mattresses, mattress overlays, mattress replacements, or speciality mattress products that have *not* been designed by Hill-Rom for the TotalCare® Bariatric Bed. Use of surface products other than those designed for the TotalCare® Bariatric Bed could substantially reduce the effectiveness of the safety features incorporated into the system.

WARNING:
Sleep surface impermeability *will be degraded* when needle sticks or other puncture damage occurs to the sleep surface. Use x-ray cassette covers to avoid damaging the sleep surface ticking.

Regularly inspect the sleep surface for x-ray cassette damage or needle punctures.

Patient weight and equipment is not too exceed 500 lb (227 kg) maximum (safe working load), and 250 lb (113.4 kg) minimum. The safe working load weight includes: patient weight, mattress, IV pumps, poles, and bags.

Flammability

Reduce the possibility of fires by observing fire prevention rules and regulations.

The sleep surface mattress meets the following specifications:

- The sleep surface foam meets applicable requirements of California Technical Bulletin 117—*Requirements, Test Procedure and Apparatus for Testing the Flame Retardance of Resilient Filling Materials Used in Upholstered Furniture*.
- The sleep surface meets applicable requirements of: California Technical Bulletin 129—*Flammability Test Procedure for Mattresses for Use in Public Buildings*; Boston Fire Department BFD, IX-11—*Mattress Fire Test*; '97 LSC - NFPA 101: 1997—*Life Safety Code*, and 16CFR1632, *Standard for the Flammability of Mattresses and Mattress Pads*.

Preventive Maintenance (Capital Products Only)

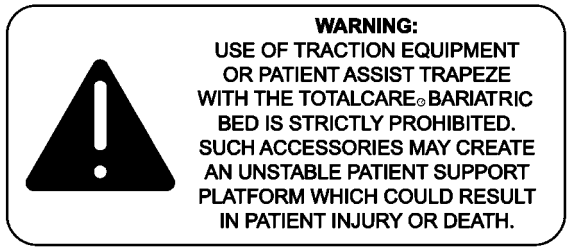
Perform preventive maintenance to ensure all TotalCare® Bariatric Bed components are functioning as originally designed. See "Preventive Maintenance (Capital Products Only)" on page 6-11.

Routine Maintenance (Rental Products Only)

Perform routine maintenance to ensure all TotalCare® Bariatric Bed components are functioning as originally designed. See "Routine Maintenance (Rental Products Only)" on page 6-16.

Warning and Caution Labels

Figure 1-5. Warning and Caution Labels



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Chapter 2
Troubleshooting Procedures

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NOTES:

Getting Started

With the exception of the following troubleshooting procedure, the troubleshooting procedures for the TotalCare® Bariatric Bed are the same as the procedures for the TotalCare® Bed System. Refer to the *TotalCare® Bed System Service Manual* (man112) for further details.

WARNING:
Only facility-authorized personnel should troubleshoot the TotalCare® Bariatric Bed. Troubleshooting by unauthorized personnel could result in personal injury or equipment damage.

Begin each procedure in this chapter with step 1. Follow the sequence outlined (each step assumes the previous step has been completed). In each step the normal operation of the product can be confirmed by answering **Yes** or **No** to the statement. Your response will lead to another step in the procedure, a repair analysis procedure (RAP), or a component replacement. If more than one component is listed, replace them in the given order.

Before troubleshooting, ensure the bed is on a clean, dry, **flat** surface.

Bed Not Level

1. Place and angle indicator on the weigh frame and check the head to foot angle. Is the angle more than 3°?

   Yes **No**
   ↓ → No further action required.

2. Inspect the bed frame for bent frame components. Are there any bent frame components?

   Yes **No**
   ↓ → Go to step 5.

3. Replace bent frame components. Does this fix the condition?

   Yes **No**
   ↓ → Go to step 5.

4. Go to “Function Checks” in the *TotalCare® Bed System Service Manual* (man112).

5. Inspect the hydraulic cylinder pins for being bent. Are there any bent pins?

   Yes **No**
   ↓ → Go to step 8.

6. Replace the bent pins. Does this fix the conditions?

   Yes **No**
   ↓ → Go to step 8.

7. Go to “Function Checks” in the *TotalCare® Bed System Service Manual* (man112).

8. Inspect the casters for bent caster stems. Are the caster stems bent?

   Yes **No**
   ↓ → Go to step 11.

9. Replace the casters. Does this fix the condition?

   Yes **No**
   ↓ → Go to step 11.

10. Go to “Function Checks” in the *TotalCare® Bed System Service Manual* (man112).

11. Call Hill-Rom Technical Support at (800) 445-3720 for technical assistance.

Chapter 3
Theory of Operation

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NOTES:

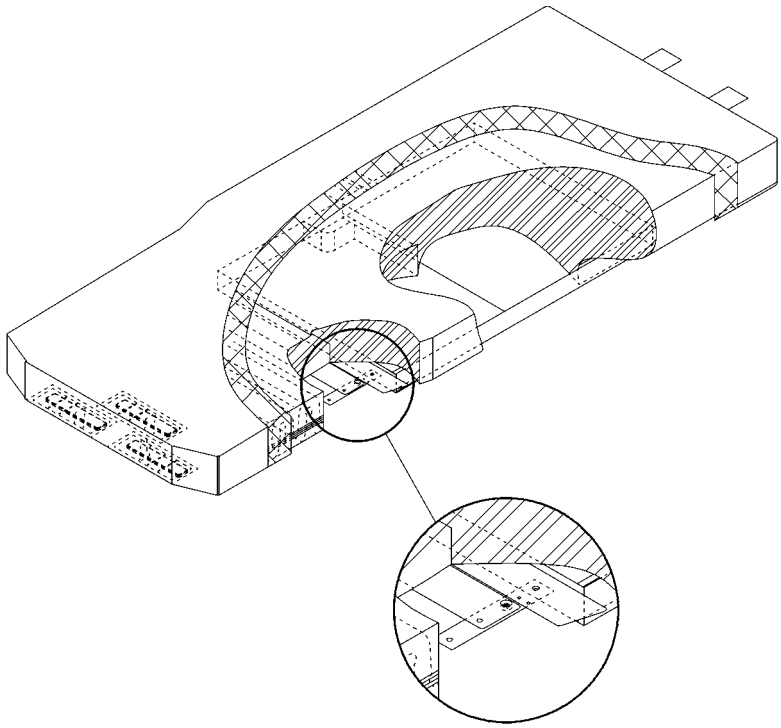
Theory of Operation

With the exception of the sleep surface, the theory of operation of the TotalCare® Bariatric Bed is the same as the TotalCare® Bed System. Refer to chapter 3 of the *TotalCare® Bed System Service Manual* (man112) for further details.

Sleep Surface

The sleep surface contains a layered, all-foam, primary surface (see figure 3-1 on page 3-3). This surface provides limited pressure distribution characteristics and also does not adjust to changes in frame articulation angles.

Figure 3-1. Sleep Surface



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NOTES:

Tool and Supply Requirements

To service the TotalCare® Bariatric Bed, the following tools and supplies are required:

- Kit—Hi-Lo cylinder brace (P/N SA1695)
- Kit—Torx®[1] bits P/N SA1561, includes (T10 Torx® bit P/N SA4949, T25 Torx® bit P/N SA4950, and T45 Torx® bit P/N SA4951)
- T25 Torx® head screwdriver
- T10 Torx® head screwdriver
- Wheel blocks
- 8" #2 phillips head screwdriver
- 0.073" feeler gauge
- 7/16" deep well socket
- Ratchet
- Ball peen hammer
- 1/4" drift punch
- Jack capable of lifting 600 lb (272 kg)
- 4" x 4" x 30" (10 cm x 10 cm x 76 cm) wood jacking brace
- Needle nose pliers
- T15 Torx® head screwdriver
- 1/4" nut driver
- Thin applicator knife (optional)
- 9/16" open end wrench
- 9/16" open end torque adapter
- 9/16" deep well socket
- Large basting syringe
- 1/4" flexible Tygon®[2] hose
- 1/2 gal container, clean
- Small funnel

1. Torx® is a registered trademark of Textron, Inc.
2. Tygon® is a registered trademark of Norton Company.

- 5/8" open end wrench
- 5/8" deep well socket
- Towels
- ½" open end wrench
- ¼" open end wrench
- AC/DC Volt/Ohms meter
- 3 AG fuse puller
- Calibration weights, 200 lbs (91 kg)
- 4" diagonal cutters
- Torque wrench, 0 in-lb to 25 in-lb (0 N·m to 2.8 N·m)
- Torque wrench, 50 in-lb to 150 in-lb (5.6 N·m to 17.0 N·m)
- Electrical ground fault detector
- Megameter
- Hydraulic fluid, P/N 31699s
- Loctite®[1] adhesive, 242
- Angle indicator

1. Loctite® is a registered trademark of Loctite Corporation.

Removal, Replacement, and Adjustment Exceptions

With the exception of the following removal, replacement, and adjustment procedures, the removal, replacement, and adjustment procedures for the TotalCare® Bariatric Bed are the same as the procedures for the TotalCare® Bed System. Refer to chapter 4 of the *TotalCare® Bed System Service Manual* (man112) for further details.

4.1 Counterweight

Tools required: 1/2" socket Ratchet

Removal

1. Set the brakes.
2. Raise the bed to the highest position.

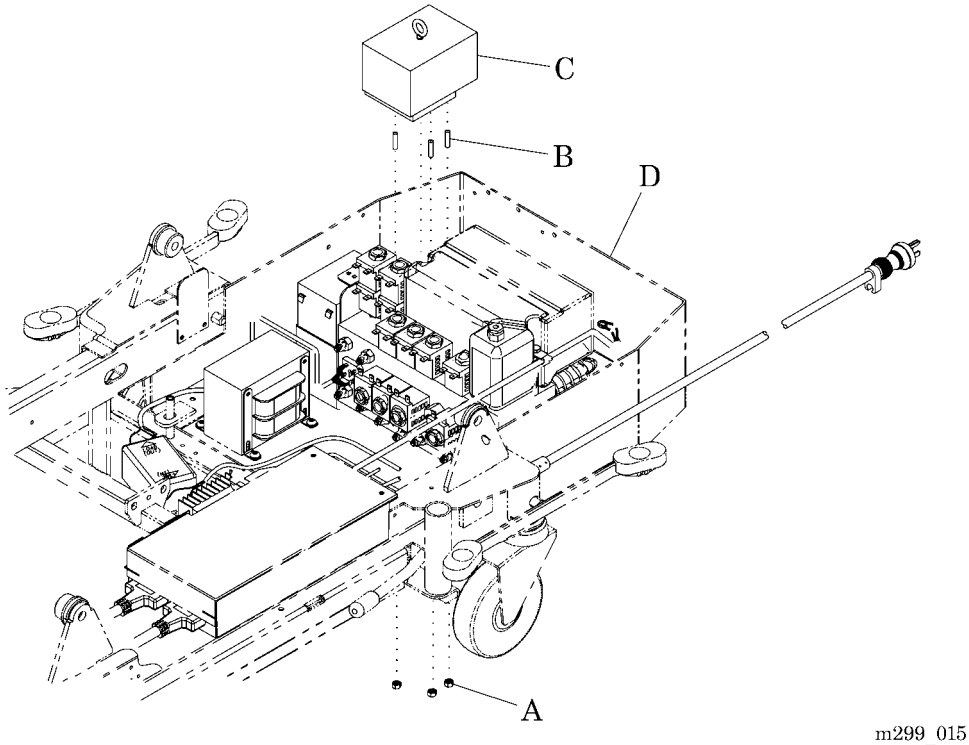
SHOCK HAZARD:
Unplug the unit from its power source. Failure to do so can result in personal injury or equipment damage.

3. Unplug the bed from its power source.
4. Remove the head end covers. Refer to “Cover—Head End” in the *TotalCare® Bed System Service Manual* (man112).
5. Install the Hi-Lo cylinder braces. Refer to “Hi-Lo Cylinder Brace—SA1695” in the *TotalCare® Bed System Service Manual* (man112).
6. Remove the three nuts (A) securing the counterweight (C) to the bed (D) (see figure 4-1 on page 4-7).

WARNING:
The counterweight weighs in excess of 75 lb (34 kg). Use two people when removing or installing the counterweight. Failure to do so can result in personal injury.

7. Remove the counterweight (C).

Figure 4-1. Counterweight



Replacement

WARNING:
The counterweight weighs in excess of 75 lb (34 kg). Use two people when removing or installing the counterweight. Failure to do so can result in personal injury.

1. Install the counterweight (C) into the bed (D).
2. Install the three nuts (A) onto the screws (B) securing the counterweight (C) into the bed (D).
3. Remove the Hi-Lo cylinder braces. Refer to “Hi-Lo Cylinder Brace—SA1695” in the *TotalCare® Bed System Service Manual* (man112).
4. Install the head end covers. Refer to “Cover—Head End” in the *TotalCare® Bed System Service Manual* (man112).

4.2 Head Siderail

Tools required: T25 Torx®[1] head screwdriver
Hi-Lo cylinder brace (P/N SA1695)
Small screwdriver

Removal

1. Set the brakes.
2. Raise the bed to its highest position.

SHOCK HAZARD:
Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.

3. Unplug the bed from its power source.

SHOCK HAZARD:
Disable the battery. Failure to do so could result in personal injury or equipment damage.

4. Disable the battery.
5. Remove the head end covers. Refer to “Cover—Head End” in the *TotalCare® Bed System Service Manual* (man112).
6. Install the Hi-Lo cylinder braces. Refer to “Hi-Lo Cylinder Brace—SA1695” in the *TotalCare® Bed System Service Manual* (man112).
7. Raise the head siderail.
8. Unplug the siderail cable from the weigh frame junction box.
9. Remove the cable ties that secure the siderail cable to the frame.
10. Remove the siderail cable from the frame.
    a. For the left-hand siderail, reference junction board connector P1.
    b. For the right-hand siderail, reference junction board connector P7.

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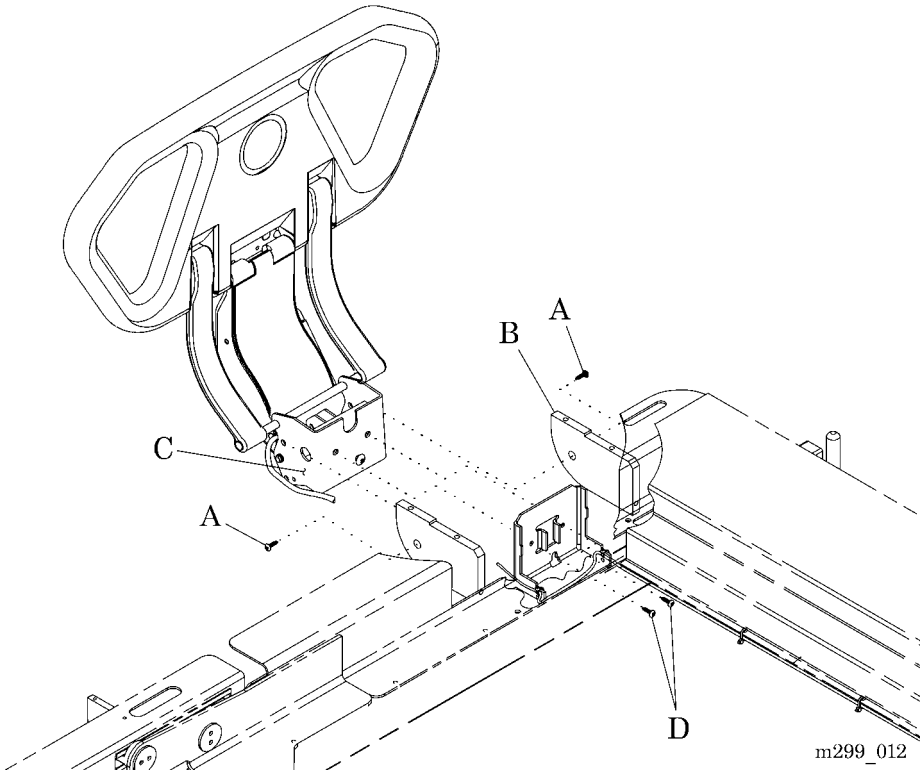
11. Remove the two screws (A) from the deck mounting plate (B) (see figure 4-2 on page 4-9).

Figure 4-2. Head Siderail



12. Remove the two screws (D) securing the head siderail (C) to the bed.

13. Remove the head siderail (C).

Replacement

1. Ensure that the replacement head siderail is the same type as the one removed.

2. Perform the removal procedure in reverse order.

3. To ensure proper operation of the TotalCare® Bariatric Bed, perform the "Function Checks" in the *TotalCare® Bed System Service Manual* (man112).

4.3 Intermediate Siderail

Tools required: T25 Torx®[1] head screwdriver
Hi-Lo cylinder brace (P/N SA1695)
Small screwdriver

Removal

1. Set the brake on the bed.

2. Raise the bed to its highest position.

SHOCK HAZARD:
Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.

3. Unplug the bed from its power source.

SHOCK HAZARD:
Disable the battery. Failure to do so could result in personal injury or equipment damage.

4. Disable the battery.

NOTE:
Disconnect the intermediate siderail cabling from the wiring harness. The intermediate siderail cable should remain with the removed siderail.

5. Disconnect the intermediate siderail cabling from the wiring harness as follows:
   a. Remove all the cable ties from the harness.
   b. Disconnect the in-line harness connector at the weigh frame junction electrical box (plug P10 left and plug P3 right).

6. Remove the two screws (A) from the deck mounting plate (B) (see figure 4-3 on page 4-11).

7. Remove the two screws (D) securing the siderail (C) to the bed.

8. Remove the siderail (C) and the wiring harness.

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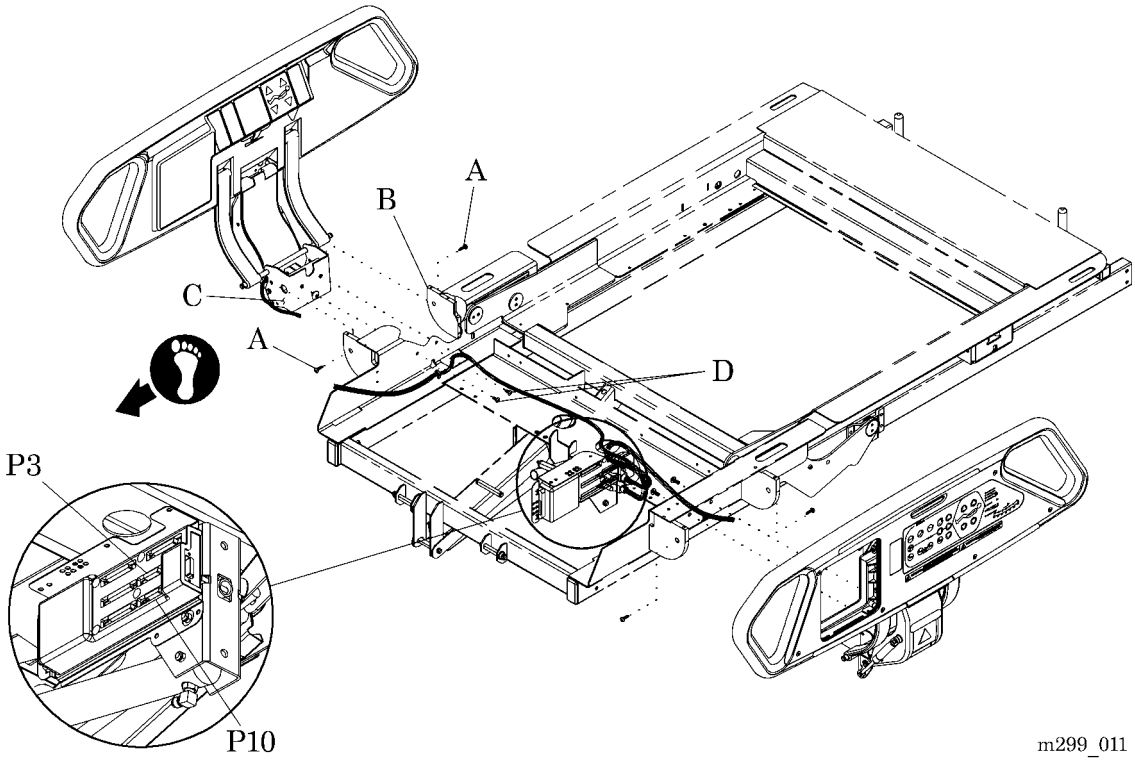
Figure 4-3. Intermediate Siderail



Replacement

1. Perform the removal procedure in the reverse order.
2. To ensure proper operation of the TotalCare® Bariatric Bed, perform the "Function Checks" in the *TotalCare® Bed System Service Manual* (man112).

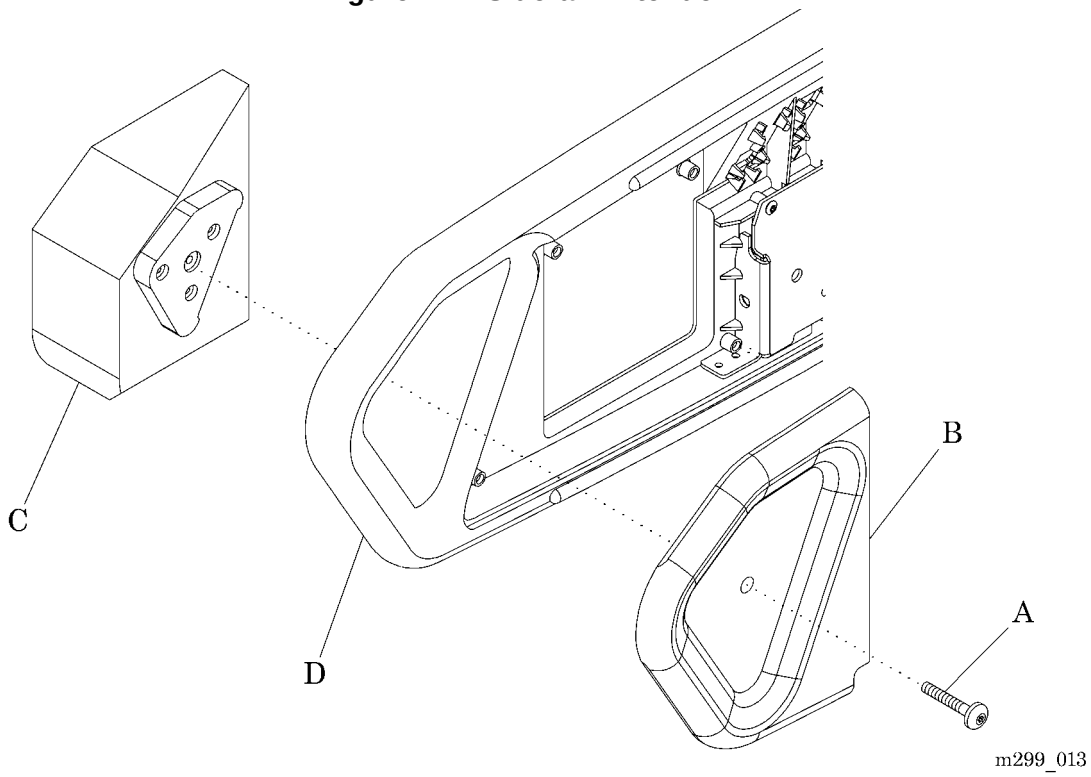
4.4 Siderail Extender

Tools required: T45 Torx®[1] head screwdriver

Removal

1. Remove the screw (A) securing the cover plate (B) and extender (C) to the siderail.
2. Remove the cover plate (B) and extender (C) from the siderail (C).

Figure 4-4. Siderail Extender



Replacement

1. Perform the removal procedure in the reverse order.

NOTE:
The thicker end of the extender goes toward the foot end of the bed.

2. To ensure proper operation of the TotalCare® Bariatric Bed, perform the "Function Checks" in the *TotalCare® Bed System Service Manual* (man112).

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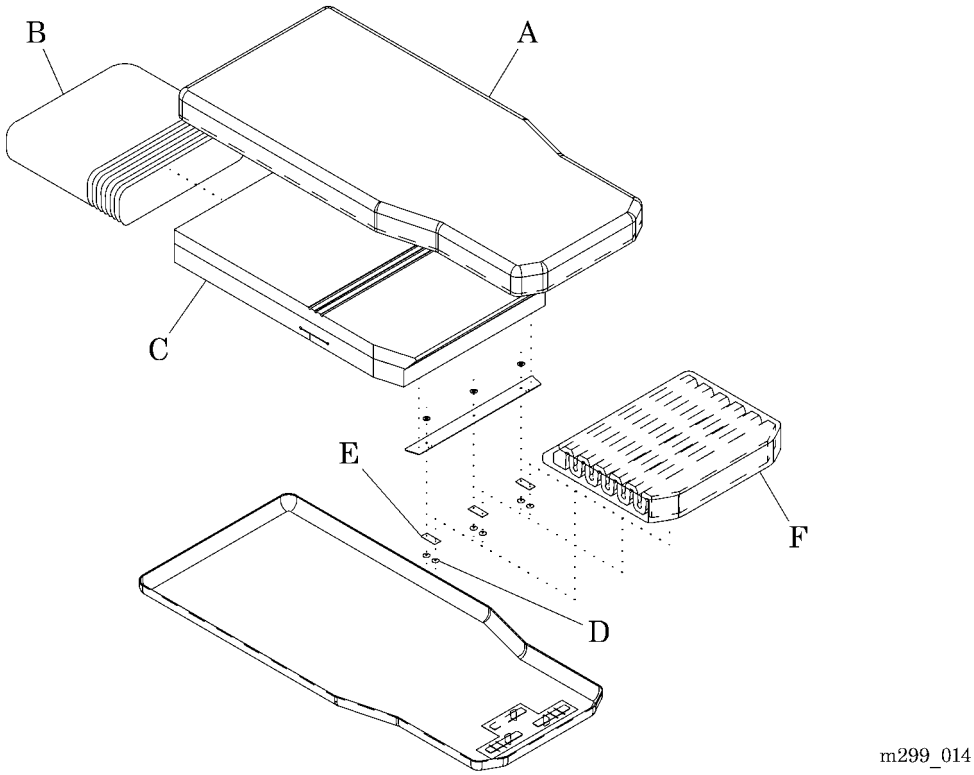
4.5 Sleep Surface

Tools required: None

Removal

1. Press the **Bed Flat** control to place the bed in the flat position.
2. Press the **Hi-Lo Up** control to raise the bed to the high position.
3. Unzip the upper ticking (A) to gain access to the fire barrier (B) (see figure 4-5 on page 4-13).

Figure 4-5. Sleep Surface



4. Remove the fire barrier (B).
5. Unsnap the snaps (D) securing the straps (E) to the foot section (F) and mattress (C).
6. Check all surfaces of each component for staining.
7. Discard all stained foam.

Replacement

1. Replace all stained foam material with new material.
2. Perform the removal procedure in reverse order.
3. Ensure that all of the foam components are fully encased in the acrylic fire barrier.
4. Position and align the sleep surface sections inside the compartments of the frame.
5. Press the **Chair** caregiver control, and articulate the bed to verify that the sleep surface functions properly.
6. To ensure proper operation of the TotalCare® Bariatric Bed, perform the "Function Checks" in the *TotalCare® Bed System Service Manual* (man112).

Chapter 5
Parts List

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NOTES:

Warranty

HILL-ROM COMPANY, INC.
LIMITED WARRANTY

Hill-Rom Company, Inc. (Hill-Rom) has a long tradition of providing superior products and service to our customers. Our goal is "Total Customer Satisfaction". In that spirit, Hill-Rom is proud to offer the following warranty.

GENERAL WARRANTY (APPLICABLE UNLESS A SPECIFIC WARRANTY IS LISTED)

Hill-Rom warrants to the original purchaser that its products and replacement parts shall be free from defects in material and workmanship for a period of one (1) year from date of delivery. Hill-Rom's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of Hill-Rom, found to be defective. In addition to the foregoing one year warranty, Hill-Rom warrants to the original purchaser that the frame and welds on its products will be free from structural defects for the life of the product. Any product upgrade or modification initiated by Hill-Rom does not affect the original product warranty.

SPECIFIC WARRANTIES

MATTRESS WARRANTIES

Hill-Rom warrants to the original purchaser that its mattress product shall be free from defects in material and workmanship for a period of two (2) years from date of delivery. However, electro mechanical mattress components (compressors, valves, printed circuit boards, hoses, and couplers) are covered by the general one (1) year warranty.

EXPENDABLES WARRANTIES

A sixty (60) day limited warranty from date of delivery applies to expendable parts such as cushions, coverlets, software diskettes, locator badge batteries, dome light incandescent bulbs, overhead fluorescent tubes, heating elements, temperature probes, filter sheets, and microspheres. This warranty is limited to replacement of the parts covered.

TO OBTAIN PARTS AND SERVICE

In the United States, call Hill-Rom Technical Support Department at (800) 445-3720, Monday through Friday. In Canada, call Hill-Rom Technical Support Department at (800) 267-2337, Monday through Friday. Outside the United States and Canada, call your authorized Hill-Rom Distributor. In order to expedite service, we request you furnish the following information: customer identification number, product model number, serial number, and description of problem. A qualified specialist will provide, via telephone (United States and Canada), or FAX (Outside the United States and Canada), troubleshooting assistance for facility personnel and provide necessary parts to make repairs. If troubleshooting determines the need for on-site technical service, a qualified service representative will be dispatched. Replacement of non-technical items will be the responsibility of the customer. If requested by Hill-Rom, products or parts for which a warranty claim is made shall be returned prepaid to Hill-Rom's factory.

OUT OF WARRANTY EXCHANGE POLICY

After the expiration of the original warranty, upon request, Hill-Rom will ship as a replacement, components such as selected: motors and printed circuit boards, for like units returned to Hill-Rom by the original purchaser at a substantial savings. Please call Hill-Rom Technical Support Department for current pricing.

PARTS AVAILABILITY POLICY

Hill-Rom will offer parts for new and remanufactured products for ten (10) years from date of sale; for communications products for five (5) years from date of sale.

Note: Some original component parts and assemblies may not be available; functional equivalents may be substituted.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE. HILL-ROM'S OBLIGATION UNDER THESE WARRANTIES SHALL NOT INCLUDE ANY LIABILITY FOR LOSS OF PROFITS, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAYS. Some states, provinces, or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply. Any improper or negligent use, any alterations or repairs not in accordance with Hill-Rom's manuals or performed by others in such manner as in Hill-Rom's sole judgment affects the product materially and adversely, shall void these warranties. These warranties do not cover failures due to misuse, abuse, neglect, or lack of routine maintenance. No employee or representative of Hill-Rom is authorized to change these warranties in any way or grant any other warranty unless in writing and signed by a Hill-Rom officer. These warranties provide specific legal rights; but, there may be other available rights, which vary from state to state, province to province, or country to country.

Revised July 6, 2001

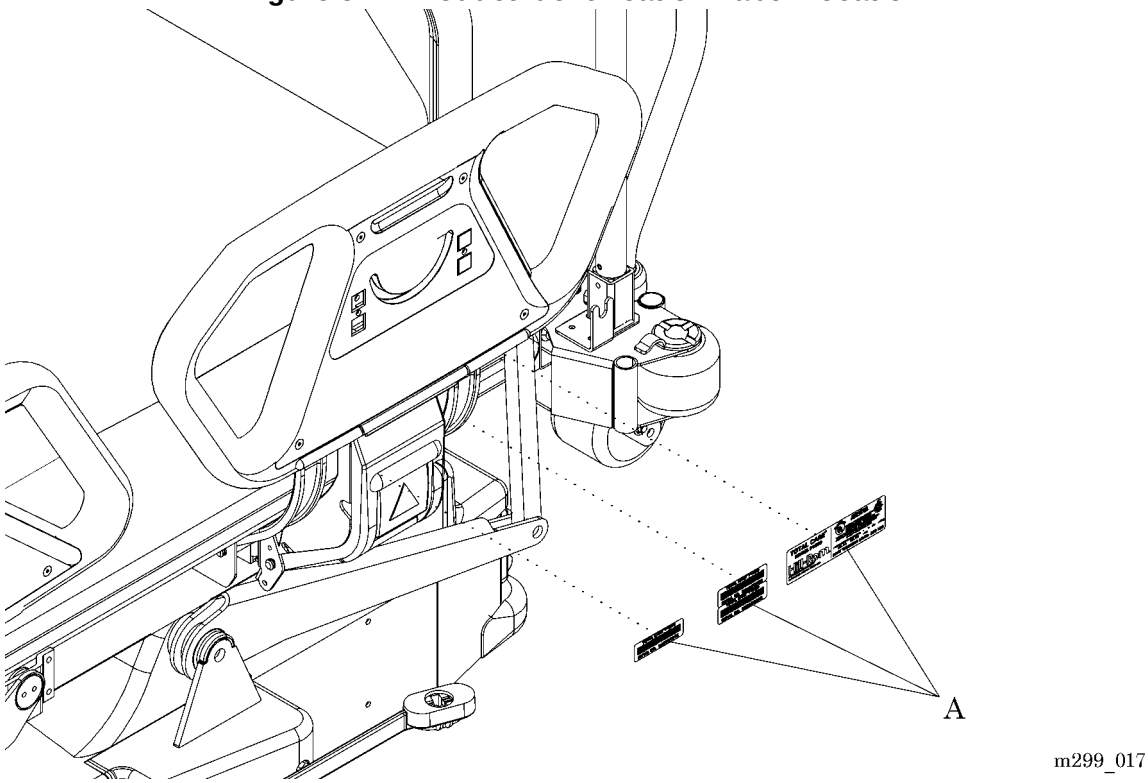
Hill-Rom Company, Inc., 1069 State Route 46 E, Batesville, IN 47006-9167

NOTES:

Service Parts Ordering

Using the parts lists in this manual, identify the part number(s) you require. Find the product number and serial number on the product identification label (A) (see figure 5-1 on page 5-5).

Figure 5-1. Product Identification Label Location



Call Hill-Rom Technical Support at (800) 445-3720 with the following information:

- Customer account number
- Purchase order number
- Product number
- Serial number
- Part number(s)
- Rental serial number

To promptly order parts, request part prices and availability, or follow up on a service order, use the following Hill-Rom fax number:

(812) 934-8472

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Terms:

- Net 30 days
- F.O.B. Batesville, IN
- Prepaid shipping charges added to invoice
- All orders shipped UPS ground unless specified

Address all inquiries to:

ATTN TECHNICAL SUPPORT—PARTS
HILL-ROM COMPANY, INC.
1069 STATE ROUTE 46 E
BATESVILLE IN 47006-9167

Address all return goods to:

ATTN SERVICE STORES
DISTRIBUTION CENTER DOOR D23
HILL-ROM COMPANY, INC.
COUNTY ROAD 300E
BATESVILLE IN 47006-9167

NOTE:
To eliminate possible delays or incorrect billings, **do not** return any items without a Return Material Authorization (RMA) number. When a return is requested, an RMA packet is included with each order. This packet includes an RMA number, instructions, and a shipping label. If an RMA number is not available, obtain one by phoning Hill-Rom Technical Support at (800) 445-3720.

Exchange Policy

The following are policies for in-warranty and out-of-warranty exchanges from Hill-Rom.

In-Warranty Exchanges

In some cases, Hill-Rom will request that parts/products be returned for inspection. When this occurs, you are expected to return parts/products within 30 days of receipt of the exchange part. If you fail to return the inoperative parts/products within the 30 day period, Hill-Rom will invoice your facility for the full selling price of the parts/products.

NOTE:
The preceding billing procedure pertains **only** to parts/products that Hill-Rom requests to be returned.

In some cases, the invoice accompanying the parts will show the full selling price (only for internal use at Hill-Rom). Do not confuse this price with your price.

Do not return any parts without an RMA number. When parts/products have been requested to be returned, Hill-Rom will include an RMA packet with the parts/products shipment. If an RMA number is not available, obtain one by phoning Hill-Rom Technical Support at (800) 445-3720.

Out-of-Warranty Exchanges

You are expected to return the inoperative parts/products within 30 days of receipt of the exchange part. Hill-Rom will include an RMA packet with the parts/products shipment. If an RMA number is not available, obtain one by phoning Hill-Rom Technical Support at (800) 445-3720. Hill-Rom will invoice your facility for the full selling price of the parts/products. Upon return of the inoperative parts/products, Hill-Rom will issue a credit to your facility for **the difference between the exchange price and the full selling price of the parts/products**.

Recommended Spare Parts

For a recommended spare parts list to service five or more units, see table 5-1 on page 5-8.

Table 5-1. Recommended Spare Parts

Part Number	Quantity	Description
6831001 (1830)	2	Caster, 6" integral, brake (foot end)
6831002 (1830)	2	Caster, 6" integral, brake (head end)
100-005-0594 (1830)	2	Ticking, top

Base Module

Figure 5-2. Base Module

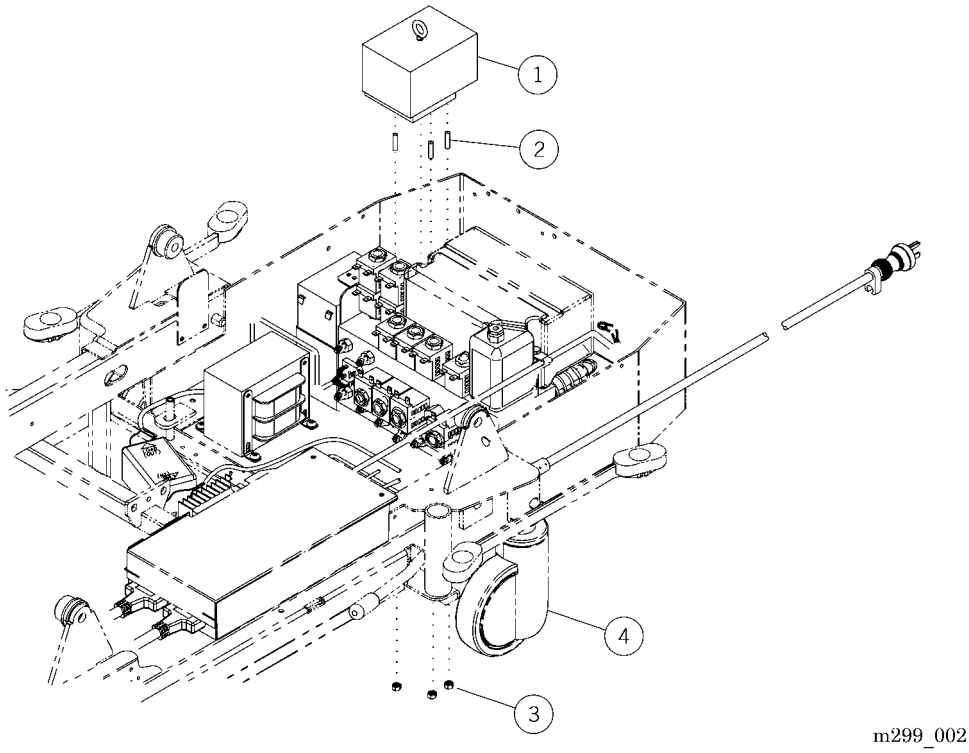

Table 5-2. Base Module

Item Number	Part Number	Quantity	Description
1	Reference only (1830)	1	Counterweight assembly
2	49521 (1830)	3	Screw
3	4435 (1830)	3	Locknut
4	6831001 (1830) or 6831002 (1830)	2 2	Caster, 6" integral, brake (foot end) Caster, 6" integral, brake (head end)

Platform Extensions

Figure 5-3. Platform Extensions

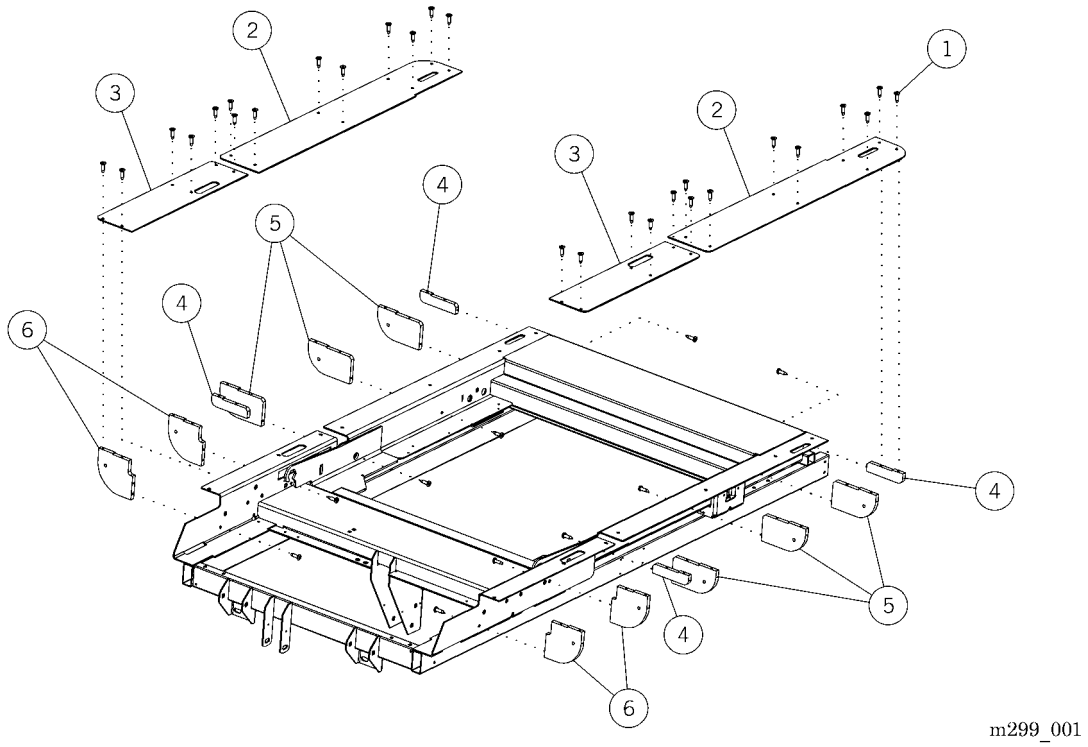

Table 5-3. Platform Extensions

Item Number	Part Number	Quantity	Description
1	43880 (1830)	46	Screw
2	Reference only (1830)	2	Extension plate, head
3	Reference only (1830)	2	Extension plate, seat
4	Reference only (1830)	4	Gusset, small
5	Reference only (1830)	6	Extension gusset, head
6	Reference only (1830)	4	Extension gusset, seat

Labels

Figure 5-4. Labels

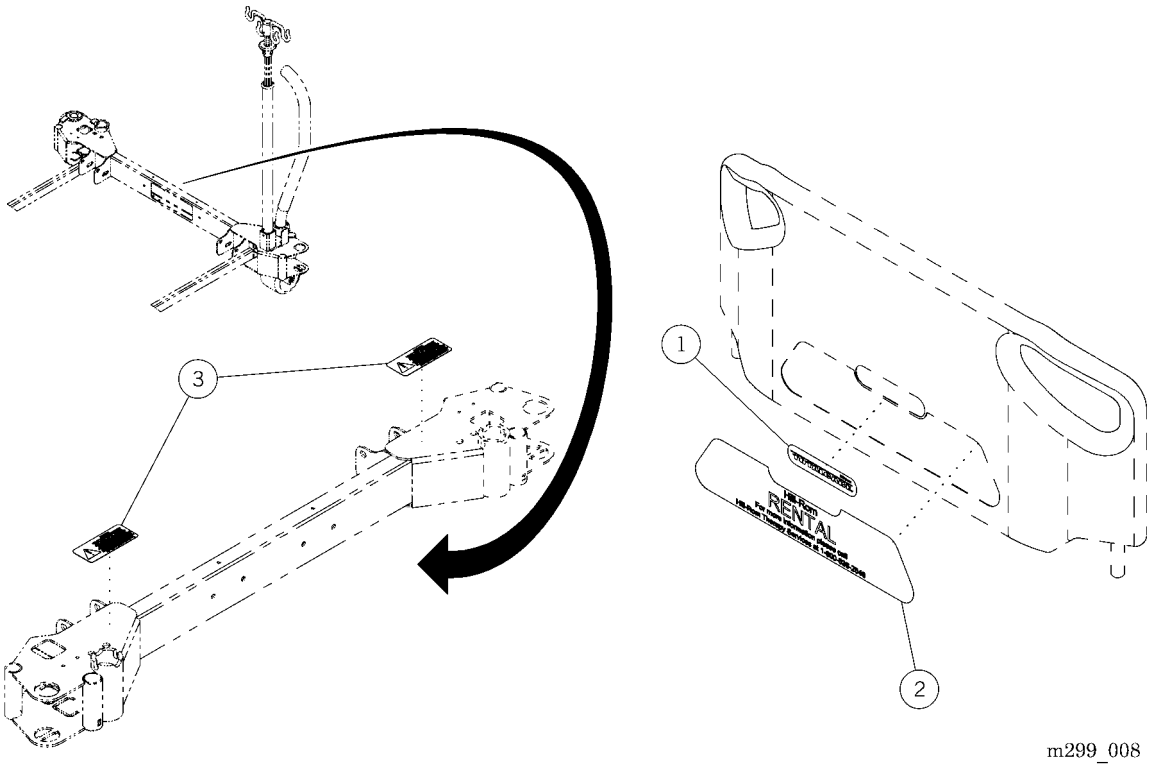

Table 5-4. Labels

Item Number	Part Number	Quantity	Description
1	49513 (1830)	1	Nameplate
2	70260 (1830) or 49510 (1830)	1 1	Label, footboard, rental (rental beds only) High pressure laminate insert, footboard (capital beds only)
3	70660 (1830)	2	Label, bariatric, traction
4 (not shown)	70261 (1830)	8	Label, bariatric, caster rental (rental beds only)

5

Head Siderail Module

Figure 5-5. Head Siderail Module

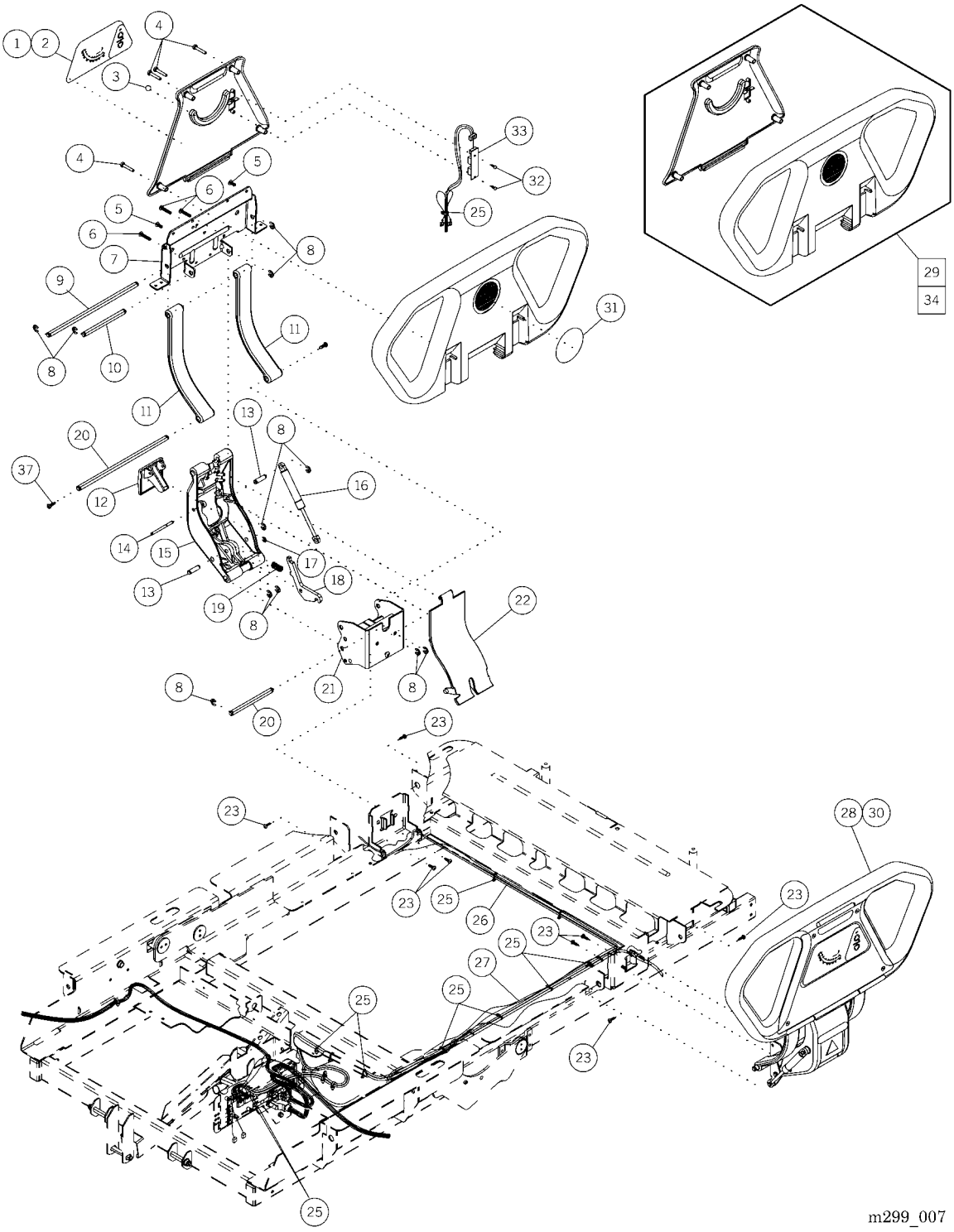

Table 5-5. Head Siderail Module

Item Number	Part Number	Quantity**	Description
1	70258 (1830)	1	Label, head angle indicator lh (lh siderail)
2	70259 (1830)	1	Label, head angle indicators, rh (rh siderail only)
3	47272 (1830)	1	Angle ball
4	4727302 (1830)	4	Screw, nylon
5	42142 (1830)	2	Screw, pan head
6	42140 (1830)	3	Screw
7	4727448 (1830)	1	Bracket, upper rail
8	3532501 (1830)	15	Retaining ring
9	69078 (1830)	2	D-pin
10	4727102 (1830)	1	D-pin
11	70240 (1830)	2	Side arm, siderail
12	47256 (1830)	1	Release lever, siderail
13	49192pl (1830)	3	Pin, latch pivot
14	47144pl (1830)	1	Shaft, siderail release lever pivot
15	62753 (1830)	1	Center arm, siderail
16	47323 (1830)	1	Dampener
17	49193 (1830)	1	E-ring
18	68860 (1830)	1	Latch siderail
19	49111 (1830)	1	Spring, latch bias
20	70220 (1830)	1	Mounting pin, siderail
21	70213 (1830)	1	Weldment, siderail mount
22	63250 (1830)	1	Center cover arm
23	43880 (1830)	4	Screw
24	6537101 (1830)	1	Head siderail assembly, rh
25	19124 (1830)	22	Large cable tie
26	6305902 (1830)	1	Cable assembly (rh siderail only)
27	6305901 (1830)	1	Cable assembly (lh siderail only)
28	47146102s (1830)	1	Head siderail
29	6537101 (1830)	1	Head siderail assembly, rh
30	47146103s (1830)	1	Head siderail rail

Item Number	Part Number	Quantity**	Description
31	49453 (1830)	1	Label, blank speaker
32	4214101 (1830)	2	Screw, Hi-Lo
33	4843301 (1830)	1	P.C. board assembly, bed up/down
34	6537102 (1830)	1	Head siderail assembly, lh

** Quantities shown are per siderail.

NOTES:

Intermediate Siderail Assembly—RH

Figure 5-6. Intermediate Siderail Assembly—RH

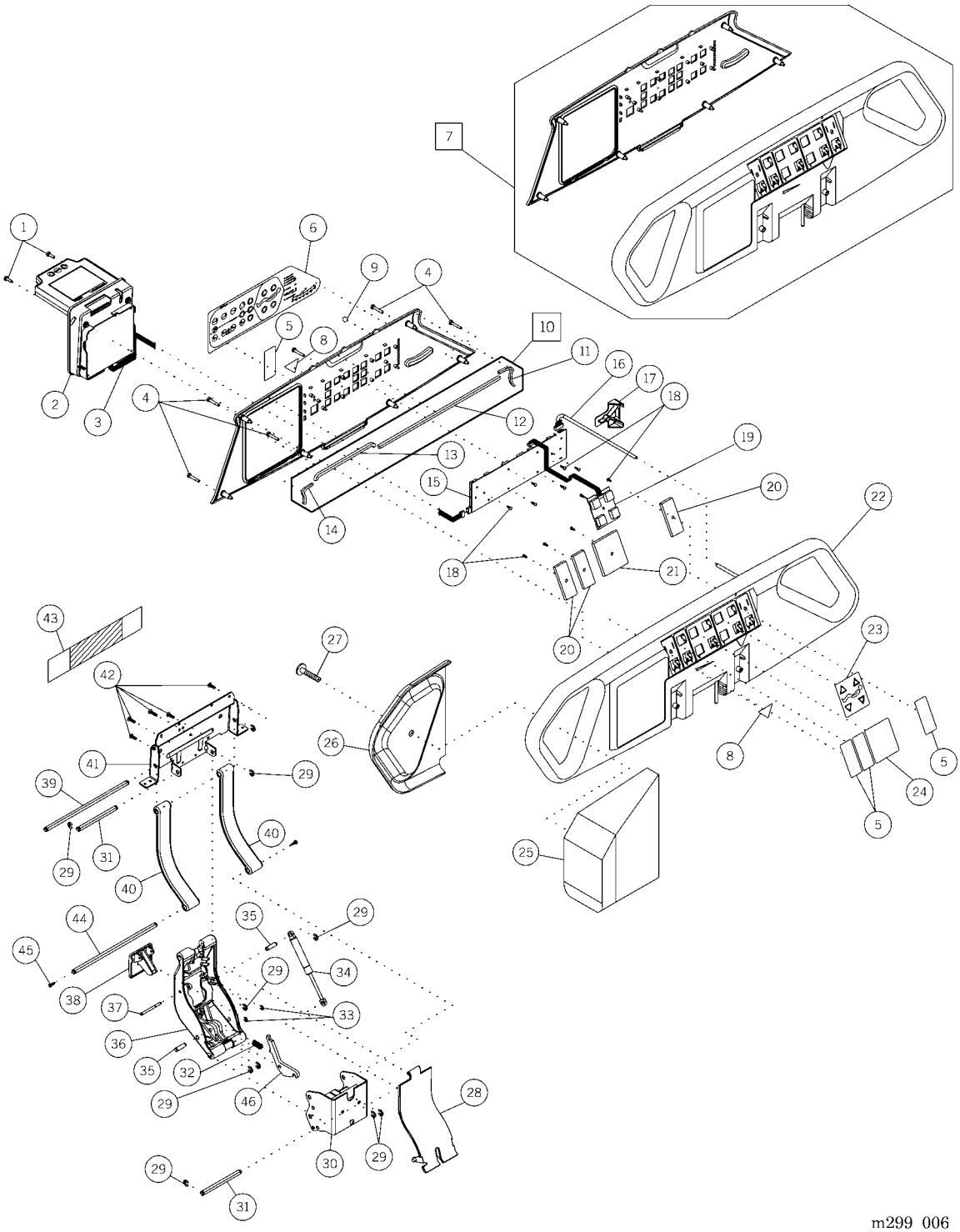

Table 5-6. Intermediate Siderail Assembly—RH

Item Number	Part Number	Quantity	Description
1	4727301 (1830)	2	Screw
2	4714711 (1830)	1	Graphical Caregiver Interface (GCI)® Control module
3	4736101 (1830)	1	Graphical Caregiver Interface (GCI)® Control LON cable assembly
4	4727302 (1830)	6	Screw
5	49451 (1830)	4	Label, blank two button
6	70257 (1830)	1	Label, caregiver control, rh
7	65370 (1830) or 47147103S (1830)	1 1	Intermediate siderail assembly, rh Intermediate siderail assembly, rh with patient controls and GCI
8	65262101 (1830)	2	Label, hip locator, English
9	47272 (1830)	1	Angle ball
10	SA1712 (1830)	1	Gasket kit, siderail
11	6678301 (1830)	1	Gasket, rh
12	66784 (1830)	1	Gasket, top
13	66785 (1830)	1	Gasket, panel
14	6678302 (1830)	1	Gasket, lh
15	4735701 (1830)	1	Right caregiver positioning P.C. board assembly
16	70262 (1830)	1	Cable assembly, weigh frame to intermediate siderail, rh
17	68769 (1830)	1	Support bracket
18	4214101 (1830)	2 or 4	Screw, Hi-Lo
19	4839203 (1830)	1	P.C. board assembly—rh—patient positioning
20	4911002 (1830)	1	Shield, two button blank
21	4911001 (1830)	1	Shield, four button blank
22	47147101s (1830)	1	Intermediate siderail assy, complete (rh)
23	4910702 (1830)	1	Label, patient articulation rh
24	49452 (1830)	1	Label, blank four button

Item Number	Part Number	Quantity	Description
25	7066502 (1830)	1	Gapper assembly, rh
26	6845402 (1830)	1	Shroud, rh
27	70674 (1830)	1	Screw
28	63250 (1830)	1	Center arm cover
29	3532501 (1830)	14	Retaining ring
30	70213 (1830)	1	Weldment, siderail mounting bracket
31	4727102 (1830)	2	D-pin
32	49111 (1830)	1	Spring, latch bias
33	49193 (1830)	2	E-ring
34	47323 (1830)	1	Dampener
35	49192pl (1830)	3	Pin, latch pivot
36	62753 (1830)	1	Center arm, siderail
37	47144pl (1830)	1	Shaft, siderail release lever pivot
38	4725663 (1830)	1	Release lever, siderail
39	69078 (1830)	2	D-pin
40	70240 (1830)	2	Sidearm, siderail
41	4727448 (1830)	1	Bracket, upper rail
42	4388002 (1830)	4	Screw, lock head Torx®[a]
43	64575 (1830)	1	User control module insulator
44	70220 (1830)	1	Mounting pin
45	43880 (1830)	2	Screw
46	47257 (1830)	1	Latch, siderail

a. Torx® is a registered trademark of Textron, Inc.

NOTES:

Intermediate Siderail Assembly—LH

Figure 5-7. Intermediate Siderail Assembly—LH

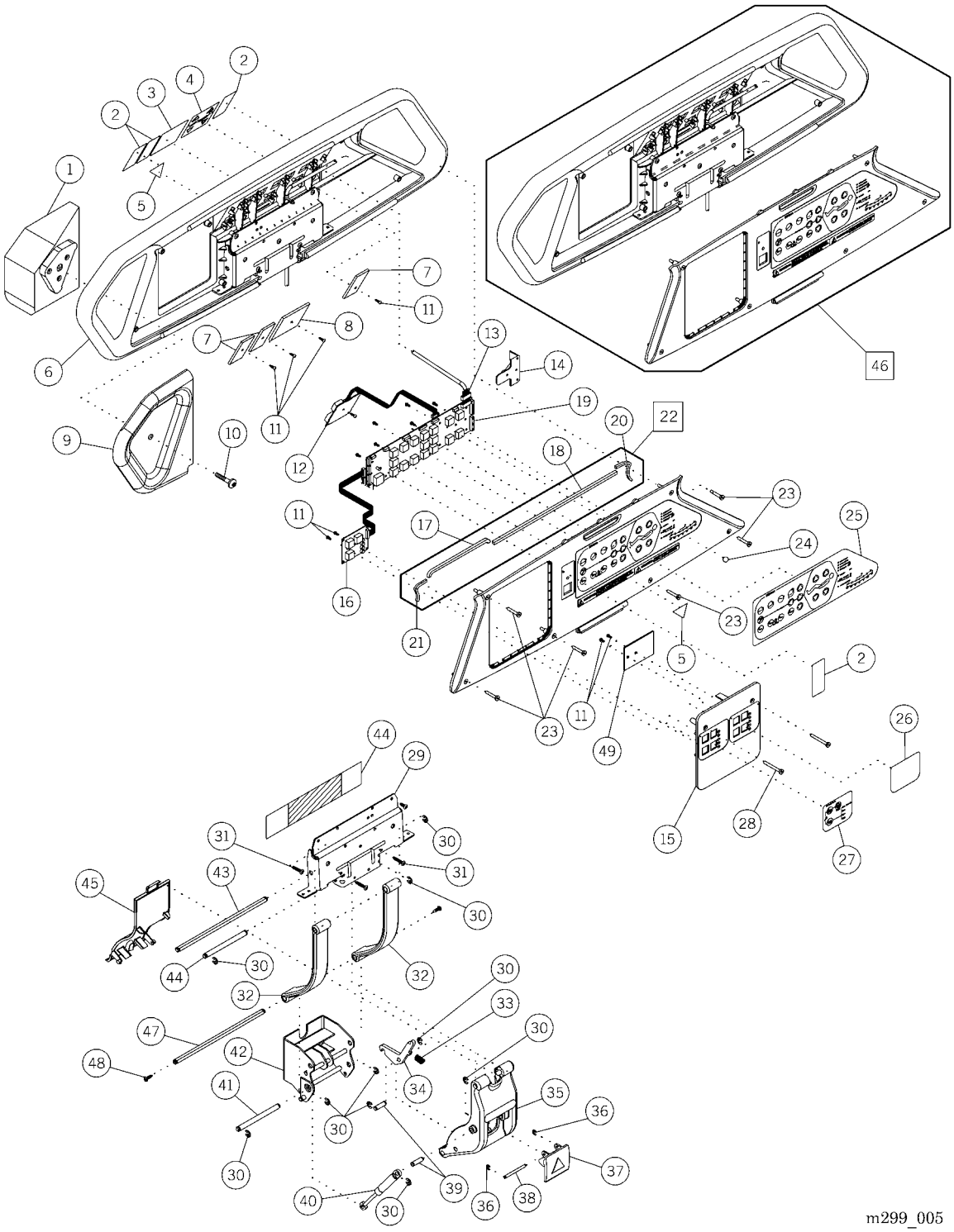

Table 5-7. Intermediate Siderail Assembly—LH

Item Number	Part Number	Quantity	Description
1	7066502 (1830)	1	Gapper assembly, rh
2	49451 (1830)	4	Label, blank two button
3	49452 (1830)	1	Label, blank four button
4	4910701 (1830)	1	Label, patient articulation lh
5	65262101 (1830)	2	Label, hip locator
6	47147100s (1830)	1	Siderail (lh)
7	4911002 (1830)	3	Shield, two button blank
8	4911001 (1830)	1	Shield, four button blank
9	6845401 (1830)	1	Shroud, lh
10	70674 (1830)	1	Screw
11	4214101 (1830)	12	Screw, Hi-Lo
12	4839201 (1830)	1	Patient positioning P.C. board and cable assembly, lh
13	70263 (1830)	1	Cable assembly, weigh frame/ intermediate siderail, lh
14	68769 (1830)	1	Support bracket
15	4728501 (1830)	1	Cover, bed setup controls
16	4705602 (1830)	1	Bed exit detection assembly
17	66785 (1830)	1	Gasket, panel
18	66784 (1830)	1	Gasket, top
19	4736001 (1830)	1	Left caregiver positioning P.C. board assembly
20	6678302 (1830)	1	Gasket, lh
21	6678301 (1830)	1	Gasket, rh
22	SA1712 (1830)	1	Gasket kit
23	4727302 (1830)	6	Screw
24	47272 (1830)	1	Angle ball
25	70256 (1830)	1	Label, caregiver control lh
26	49105 (1830)	2	Label, blank setup
27	49103 (1830)	1	Label, bed exit
28	4727303 (1830)	2	Screw

Item Number	Part Number	Quantity	Description
29	4727448 (1830)	1	Bracket, upper rail
30	3532501 (1830)	14	Retaining ring
31	4388002 (1830)	4	Screw, lock head Torx®[a]
32	70240 (1830)	2	Side arm, siderail
33	49111 (1830)	1	Spring, latch bias
34	47257 (1830)	1	Latch, siderail
35	62753 (1830)	1	Center arm, siderail
36	49193 (1830)	2	E-ring
37	4725663 (1830)	1	Release lever, siderail
38	47144pl (1830)	1	Shaft, siderail release lever pivot
39	49192pl (1830)	3	Pin, latch pivot
40	47323 (1830)	1	Dampener
41	4727102 (1830)	2	D-pin
42	70213 (1830)	1	Weldment, siderail mounting bracket
43	69078 (1830)	1	D-pin
44	64575 (1830)	1	User control module insulator
45	63250 (1830)	1	Center arm cover
46	65369 (1830) or 47147102S (1830)	1 1	Intermediate siderail assembly, LH or Intermediate siderail assembly, LH with patient controls and scale/patient exit
47	70220 (1830)	1	Mounting pin
48	43880 (1830)	2	Screw
49	4911003 (1830)	1	Shield, setup

a. Torx® is a registered trademark of Textron, Inc.

Sleep Surface

Figure 5-8. Sleep Surface

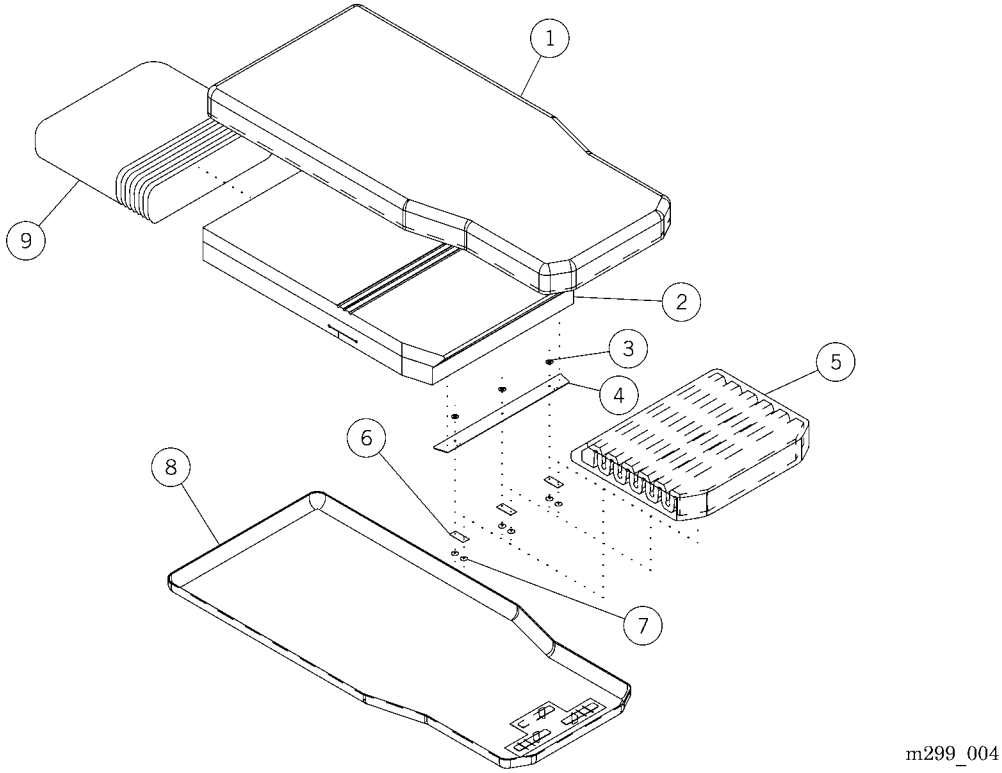

Table 5-8. Sleep Surface

Item Number	Part Number	Quantity	Description
1	100-005-0594 (1830)	1	Ticking, top
2	070-001-0122 (1830)	1	Foam, head and back section
3	Reference only	3	Snap rivet, female
4	Reference only	1	Plate, thigh
5	Reference only	1	Foot section
6	Reference only	3	Foot attachment strap
7	Reference only	6	Snap rivet, male
8	100-005-0646 (1830)	1	Ticking, bottom
9	100-010-0016 (1830)	1	Fire barrier

Shipping Brace (P1837A)

Figure 5-9. Shipping Brace (P1837A)

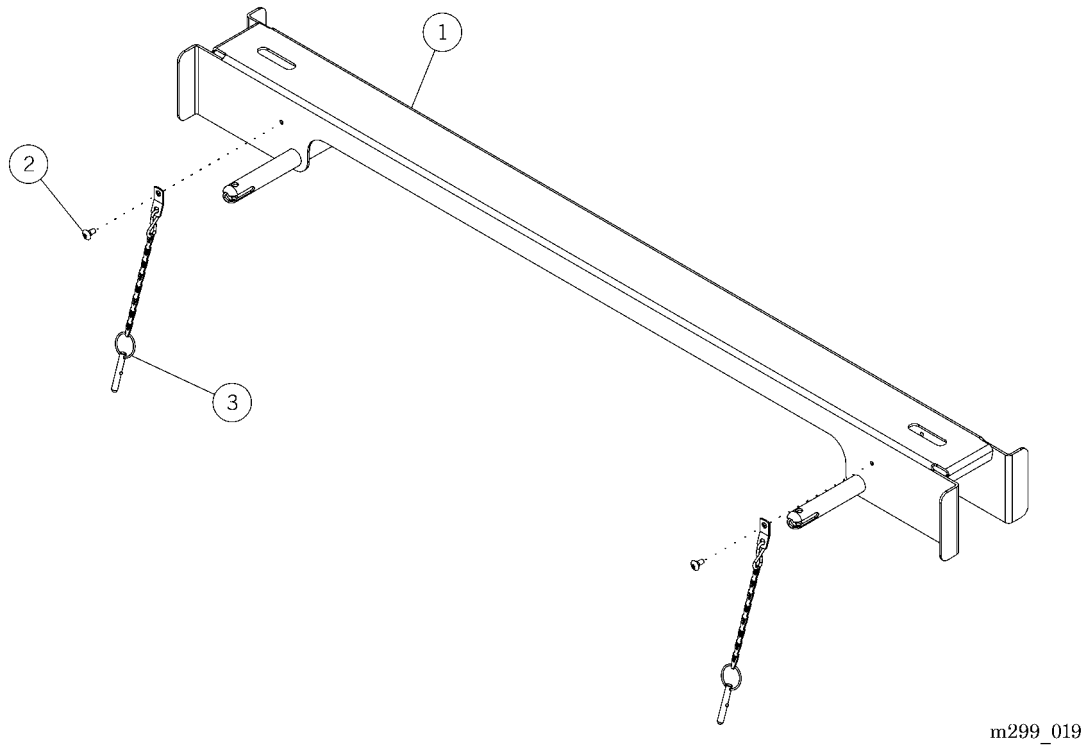

Table 5-9. Shipping Brace (P1837A)

Item Number	Part Number	Quantity	Description
1	70306 (1830)	1	Shipping assembly
2	69377 (1830)	2	Screw
3	66733 (1830)	2	Release pin assembly

Truck Ramp Accessory (P1836A)

Figure 5-10. Truck Ramp Accessory (P1836A)

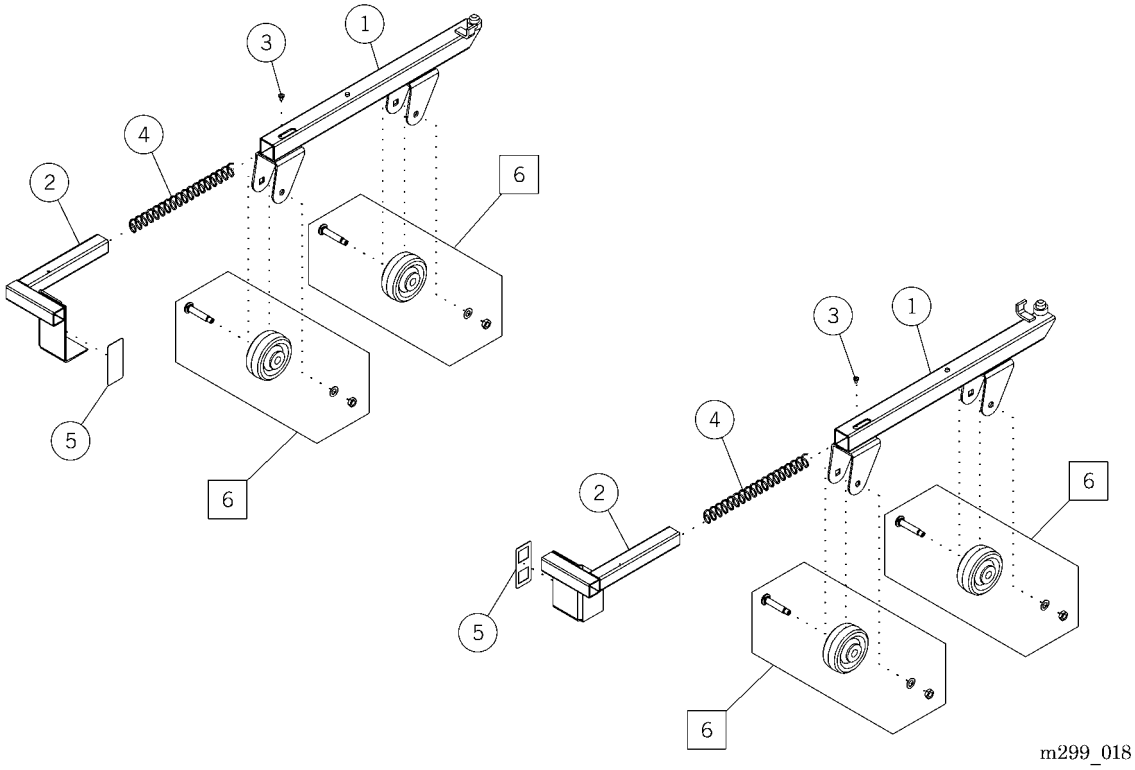

Table 5-10. Truck Ramp Accessory (P1836A)

Item Number	Part Number	Quantity**	Description
1	Reference only or Reference only	1 1	Base latch weldment, lh Base latch weldment, rh
2	6859601 (1830) or 6859602 (1830)	1 1	Box latch weldment, lh Box latch weldment, rh
3	90037-07 (1830)	1	Screw
4	68619 (1830)	1	Spring
5	49451 (1830)	1	Label, blank, 2-button
6	69383 (1830)	2	Caster assembly

** Quantities shown are per accessory.

Hitch Plate

Figure 5-11. Hitch Plate

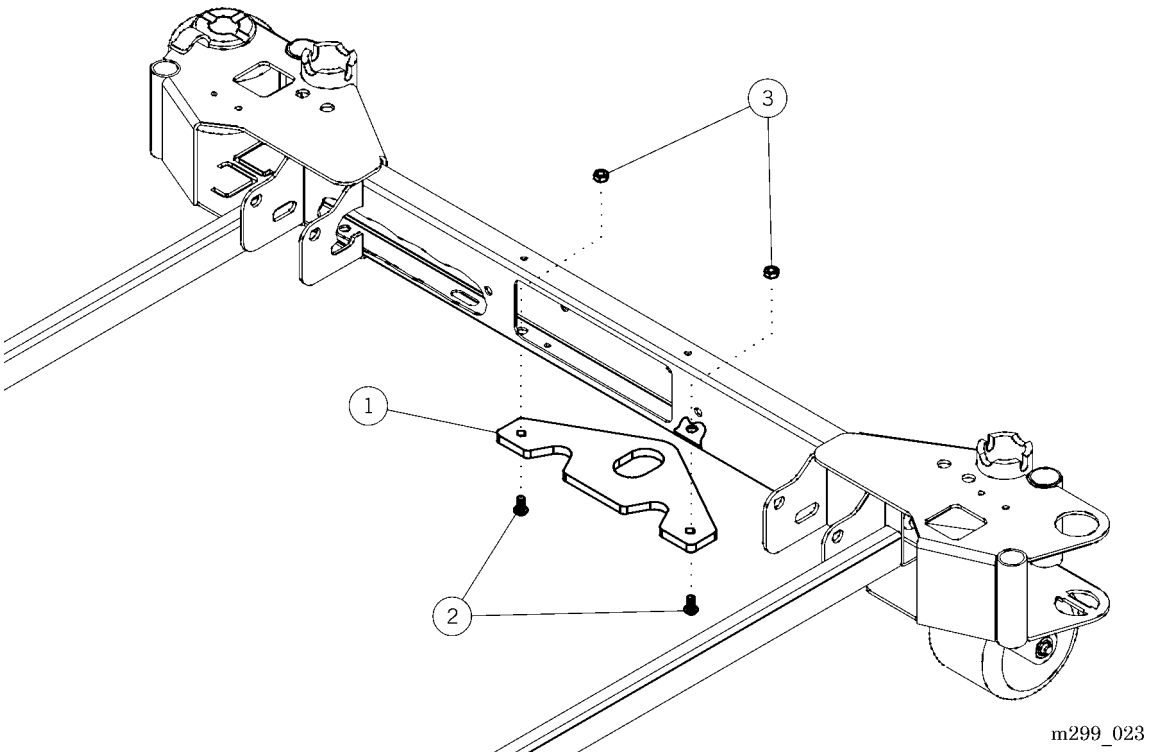

Table 5-11. Hitch Plate

Item Number	Part Number	Quantity	Description
1	70303 (1830)	1	Hitch plate
2	49521 (1830)	2	Screw
3	4435 (1830)	2	Locknut

Chapter 6
General Procedures

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6

NOTES:

General Procedures

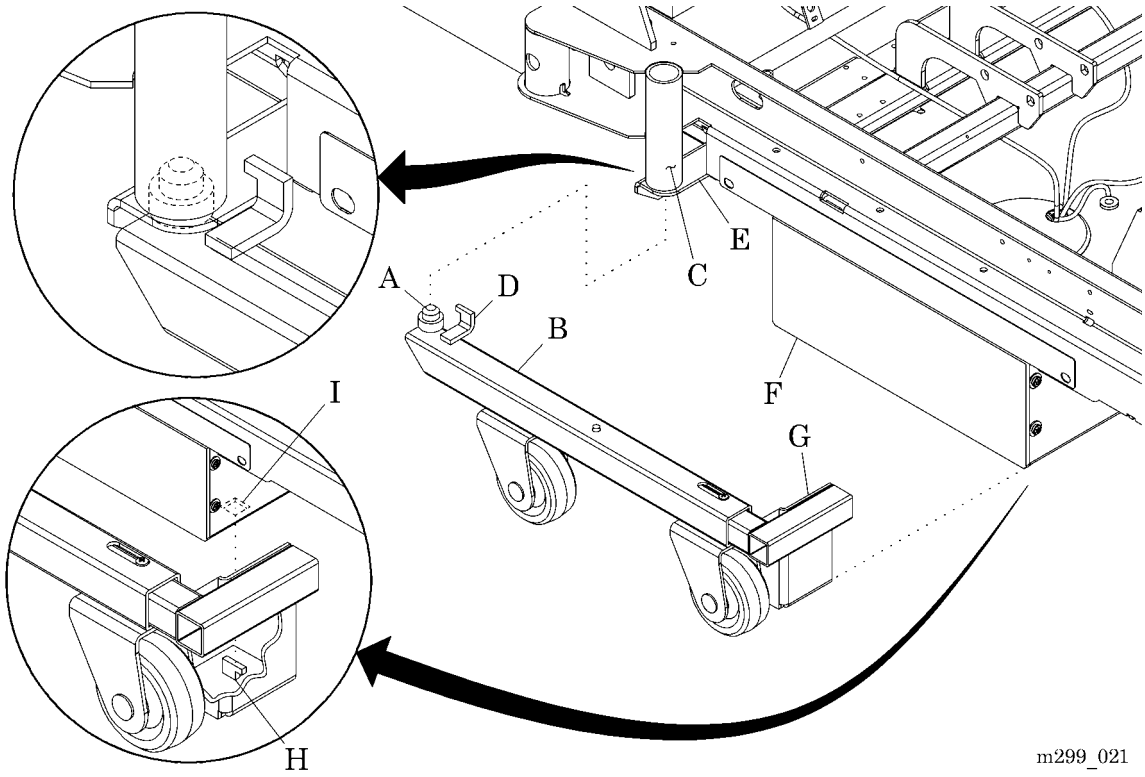
With the exception of the following general procedures, the general procedures for the TotalCare® Bariatric Bed are the same as the TotalCare® Bed System. Refer to chapter 6 of the *TotalCare® Bed System Service Manual (man112)* for further details.

6.1 Truck Ramp Accessory

Tools required: None

1. Insert the lug (A) on the truck ramp accessory (B) into the hole in the support tube (C) (see figure 6-1 on page 6-4).

Figure 6-1. Truck Ramp



2. Rotate the truck ramp accessory (B) toward the bed, so the tang (D) is on top of the plate (E).

3. Push in on the spring end (G) of the truck ramp accessory (B).

4. Lift up on the truck ramp accessory (B), so the hook (H) is inserted into the hole (I) on the bottom of the IntelliDrive® Transport System drive box (F).

5. Release the spring end (G) of the truck ramp accessory (B) so the hook (H) engages the hole (I) on the bottom of the IntelliDrive® Transport System drive box (F).

6. Repeat steps 1 through 5 for the other side.

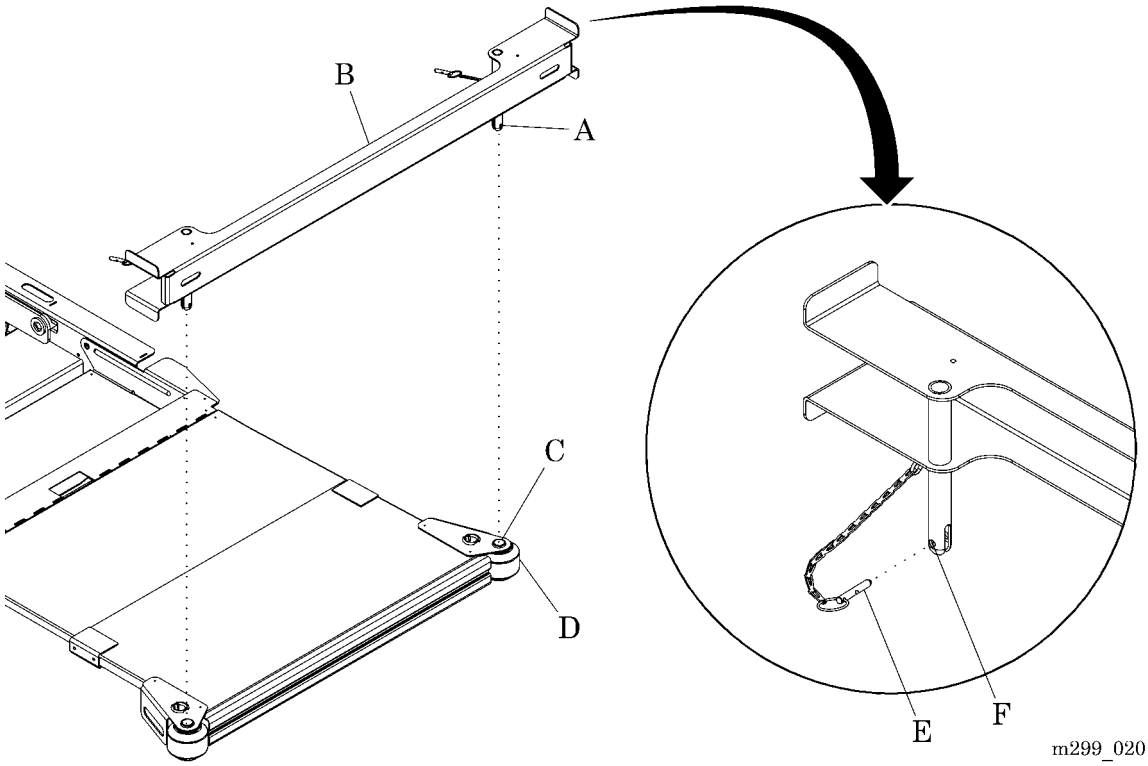
6.2 Shipping Brace

Tools required: None

NOTE:
The head and foot end shipping braces install the same way.

1. Insert the posts (A) on the shipping brace (B) into the holes (C) in the roller bumpers (D) (see figure 6-2 on page 6-5).

Figure 6-2. Shipping Brace



2. Insert the release pin (E) into the hole (F) on each post (A).

Cleaning and Care

WARNING:
Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.

SHOCK HAZARD:
Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.

SHOCK HAZARD:
Do not expose the unit to excessive moisture that would allow for liquid pooling. Personal injury or equipment damage could occur.

CAUTION:
Do not use harsh cleaners/detergents such as scouring pads or heavy duty grease removers or solvents such as acetone. Equipment damage could occur.

SHOCK HAZARD:
Take care to prevent shearing or pinching of power cords. An electrical shock hazard exists. Failure to do so could result in personal injury or equipment damage.

General Cleaning

Clean the unit with a lightly dampened cloth and any ordinary cleaner/disinfectant. Do not use excessive liquid.

1. To clean directly beneath the sleep surface at the head end of the bed, lift the head end of the mattress secured by magnets.

2. To clean directly beneath the sleep surface at the foot end of the bed, lift the foot end of the mattress secured by magnets.

Steam Cleaning

Do not use any steam cleaning device on the TotalCare® Bariatric Bed. Excessive moisture can damage mechanisms in this unit.

Cleaning Hard to Clean Spots

Always unplug the bed system before cleaning up fluid spills.

To remove difficult spots or stains, use standard household cleaners and a soft bristle brush. To loosen heavy, dried-on soil or excreta, you may first need to saturate the spot.

Some fluids used in the hospital environment, such as zinc oxide creams, if allowed to remain on the surface, will cause a permanent stain. Wipe up fluid spills as soon as possible.

Cleaning Blood and Excreta

If possible, wipe up excess blood and excreta when wet, because the cleaning process is more difficult after these substances dry and cake on the surface.

Clean blood and excreta from the surface by wiping vigorously with a lightly dampened sponge or rag using an EPA-registered (USA only), intermediate-level (tuberculocidal), cleaner/disinfectant.

Following Standard Precautions, rinse the rag or sponge periodically, after wiping, until the rag or sponge shows no evidence of the substance being cleaned. Rinsing may be required several times for puddled and dried blood.

Finally, wipe with a fresh disinfecting solution and a clean rag or sponge. Allow the ticking to air dry.

Disinfecting

Dilute and use disinfectants and germicides as specified on the manufacturer’s label.

Surface Damage

Tears, holes, and cracks in the sleep surface ticking will compromise surface impermeability and resistance to cross infection. Repairs are not recommended.

Moisture Control

All patient surfaces control the moisture content of the air within the ticking by providing greater potential for moisture vapor transfer from the inside to the

outside in the non-patient contact area than from the outside to the inside in the patient contact area.

Incontinence Protection

Protect the sleep surface mattress from incontinence as follows:

1. Cover patient surfaces with a fitted, knit, bottom sheet.

2. Loosely place a woven draw sheet centered under the pelvis extending from about the knees to the neck.

3. Center only one Hill-Rom-approved absorbent reusable or disposable incontinence pad in the buttocks region where you would expect excreta to drain. The pad should extend from the iliac crest to slightly above the knees.

   NOTE:
   Use Hill-Rom-approved absorbent materials, such as a reusable or disposable incontinence pad, size 34" x 36" (86 cm x 91 cm), or equivalent (e.g., Geri Care Super Ibex reusable or Professional Medical Kenguard®[1] disposable incontinence pad).

Linen Care

Knitted and fitted sheets are suggested for use with the sleep surface mattress. Knitted sheets allow stretching of the fabric material for installation, and fitted sheets with proper sizing are important to ensure good retention.

Best retention occurs when the fitted sheet extends 2" (5 cm) or more under the corners of the sleep surface encasement cover. Magnets inside of the ticking material and on the underside of the sleep surface assist in the retention of additional sheets and blankets. Better retention can be achieved if the number of layers folded under the magnets is minimized.

1. Kenguard® is a registered trademark of Tyco International, Inc.

Component Handling

CAUTION:
To prevent component damage, ensure that your hands are clean, and **only** handle the P.C. board by its edges.

CAUTION:
When handling electronic components, wear an antistatic strap. Failure to do so could result in component damage.

CAUTION:
For shipping and storage, place the removed P.C. board in an antistatic protective bag. Equipment damage can occur.

P.C. Board

When servicing the P.C. board, follow good handling practices. Mishandling a P.C. board can cause the following:

- P.C. board damage
- Shortened P.C. board life
- Unit malfunctions

Observe the following P.C. board handling rules:

- Ensure that hands are clean and free of moisture, oily liquids, etc.
- **Only** handle the P.C. board by its outer edges.
- Do not touch the P.C. board components. Finger contact with the board surface and/or with its components can leave a deposit that will result in board (and component) deterioration.
- When working with electronics, wear an appropriate antistatic strap, and ensure that it is properly grounded.
- Service the removed P.C. board at a static-free workstation that is properly grounded.
- For shipping and storage, place the removed P.C. board in an antistatic protective bag.

Lubrication Requirements

WARNING:
Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.

CAUTION:
Do not use silicone-based lubricants. Equipment damage could occur.

Oilite®[1] bearings and bushings are utilized in several places on the system. By retaining oil, the pores give a self-lubricating quality to the bearings and bushings. If any silicone-based lubricant is applied to the bearings and bushings or anywhere else on the system, this self-lubricating quality is neutralized.

It is safe to apply the following lubricants to the system (see table 6-1 on page 6-10):

Table 6-1. Lubricants

Part Number	Description
8252 (1830)	2 oz m-1 oil (apply to Oilite® bearings and bushings)
SA3351 (1830)	4 oz lithium grease

1. Oilite® is a registered trademark of Beemer Precision, Incorporated.

Preventive Maintenance (Capital Products Only)

WARNING:
Only facility-authorized personnel should service the TotalCare® Bariatric Bed. Servicing performed by unauthorized personnel could result in personal injury or equipment damage.

The TotalCare® Bariatric Bed requires an effective maintenance program. We recommend that you perform **semi-annual** preventive maintenance (PM) and testing for Joint Commission on Accreditation of Healthcare Organizations (JCAHO). PM and testing not only meet JCAHO requirements but will help ensure a long, operative life for the TotalCare® Bariatric Bed. PM will minimize downtime due to excessive wear.

The following PM schedule guides you through a normal PM procedure on the TotalCare® Bariatric Bed. During this PM process, check each item on the schedule, and make the necessary adjustments.

Follow the PM schedule with the corresponding PM checklist. This checklist is designed to keep a running maintenance history and subsequent repair costs for one TotalCare® Bariatric Bed. However, your facility can modify this checklist or design another to fit your needs. Two effective ways to reduce downtime and ensure the patient remains comfortable are keeping close records and maintaining the TotalCare® Bariatric Bed.

The PM schedule and checklist is intended to guide the technician through normal PM on the TotalCare® Bariatric Bed. For effective PM, each item on the schedule must be checked and any necessary adjustments must be performed. See “Preventive Maintenance Schedule and Checklist” on page 6-12.

Preventive Maintenance Schedule and Checklist

Inspector Name: _____ Inspector Signature: _____

Inspector Employee Number: _____ Date Inspected: _____

Bed Serial Number: _____ Model Number: _____

Labor Time: _____ Facility Location: _____

Indicate each step as "Pass" or "Fail" in the right-hand column.	**Pass/Fail**
Manual Hydraulic Function Test • Unplug the bed from its power source, and verify proper operation of the head functions.	
Disinfect and Inspect The Power Cord • Inspect the length of the power cord for cuts and abrasions. Replace as needed. • Inspect the length of the pendant cord for cuts and abrasions. Replace as needed. • Wipe down the entire length of the pendant cord and power cord with a facility-approved disinfectant. • Inspect all head end warning labels. Replace labels as needed.	
Ground Resistance Check • Plug the bed into a properly calibrated safety analyzer, and attach the safety analyzer to the head end lift arm ground strap. • Check that electrical ground resistance readings do not exceed the maximum specification of 200 milliohms.	
Leakage Current Check • Using a calibrated safety analyzer, verify that the bed's electrical leakage readings meet the specification of 200 microamps. G/NP _____ NG/NP _____ G/RP _____ NG/RP _____ • Unplug the bed from the analyzer.	
Disinfect and Inspect the Bed's Head End • Plug the bed into an appropriate power source. • Raise the bed to its highest position. • Raise the head section 10°, place an angle locator on the head and confirm that no greater than 3° from left to right exists. • Inspect for physical damage and missing parts, including the winch tab. Repair or replace as necessary. • Inspect the IntelliDrive® Transport System handles for physical damage. Repair or replace as necessary. • Verify the head end casters rotate 360° without touching the base frame.	

Disinfect and Inspect the Bed's Head End (continued) • Inspect the casters for proper mounting, excessive wear, or tread damage. Replace as needed. • Verify proper operation of the brake system. Adjust as necessary. • Wipe down all exposed surfaces, including the headboard, with a facility-approved disinfectant.	
IntelliDrive® Transport System Inspection • Unplug the bed. • Put the brake/steer pedal in steer, verify drive belt lowers. • Operate the system forward and reverse to ensure the controls are functioning properly (must be performed on a flat clean surface). • Wipe down the IntelliDrive® Transport System handles with a facility-approved disinfectant.	
Disinfect and Inspect the Bed's Left Side • Lower the siderails, and plug the bed into an appropriate power source. • Wipe down the mattress ticking with a facility-approved disinfectant. Inspect for physical damage. Replace as needed. • Using an angle indicator on the weigh frame, verify the angle between the head end and foot end is less than 3°. • Raise both left-hand siderails, and verify proper operation of the siderail locking function. • Inspect the left side for physical damage and missing parts. Inspect the siderails to ensure they are not bowed in or out. • Using the caregiver siderail controls, fully lower and raise the bed to test the position sensors. • Using the caregiver siderail controls, fully articulate the head and knee sections to test the position sensors. • Using the caregiver siderail controls, raise the bed, and level the surface. • Using the caregiver siderail controls, fully articulate the foot end to test the position sensors, and verify proper operation of the retractable foot mechanism. Inspect the Line-of-Site® Angle Indicators for physical damage, and verify that their ball bearings are free moving. Verify proper operation of the FlexAFoot™ Retractable Foot Mechanism. • Verify proper operation of the Trendelenburg and Reverse Trendelenburg electric mechanisms. Fully articulate the Trendelenburg and Reverse Trendelenburg electric functions to test the limit switches. • Verify proper operation of the Chair Egress Position Mechanism. • Press the **Bed Flat** control, and level the bed. • Press and hold the **Enable** control while pressing the lockout controls. Verify that the lockout lights illuminate. • Deactivate the lockouts. • Using the patient siderail controls, fully articulate the head and knee sections to test the position sensors. • Verify proper operation of the emergency CPR release mechanism.	

Disinfect and Inspect the Bed's Left Side (continued) • Verify proper operation of the emergency trendelenburg release mechanism. • Inspect the siderail extender for damage. Replace if necessary. **WARNING:** Do not spray cleansers/disinfectants directly onto the bed control switches, which are located on both sides of the siderails. Personal injury or equipment damage could occur. • Wipe down the left-hand siderails and extender with a facility-approved-approved disinfectant. Inspect for physical damage. • Wipe down all exposed surfaces with a facility-approved-approved disinfectant. Inspect for physical damage and missing parts. • Wipe down the bottom of the sleep surface with a facility-approved disinfectant. Ensure the mattress and mattress support deck are dry before installing the mattress. • Wipe down the lower frame with a facility-approved disinfectant. Inspect for physical damage and missing parts.	
Disinfect and Inspect the Bed's Foot End • Inspect the night light for proper operation. • Inspect the casters for proper mounting, excessive wear, or tread damage. Replace as needed. • Verify that the casters rotate 360°. • Using an angle indicator, verify the foot section has less than 3° inclination (left to right). • Inspect all surfaces for damage and missing parts. Wipe down all exposed surfaces with a facility-approved disinfectant. • Inspect the footboard for physical damage and missing parts. Wipe down the footboard with a facility-approved disinfectant.	
Scale Operational Test • Place the headboard in the center of the mattress, and cover it with plastic. • Using the Graphical Caregiver Interface (GCI)® Control, zero the scale from the Main Menu. • Place 200 lb (91 kg) of weight on the headboard. • Take two readings. Verify that both readings are 200 lb (91 kg) ± 1%. Remove 100 lb (45 kg) weight from the headboard. • Verify proper operation of the Bed Exit System. • Remove the 100 lb (45 kg) weight from the headboard. • Remove the plastic, and install the headboard.	
Disinfect and Inspect the Bed's Right Side • Lower the siderails. • If the mattress ticking is soiled, unzip it, and inspect the mattress for soiling or contamination. Replace if necessary.	

Disinfect and Inspect the Bed's Right Side (continued)

- Zip the mattress ticking back to the head end.
- Raise the right-hand siderails, and verify proper operation of the siderail locking function.
- Inspect the siderails to ensure they are not bowed in or out.
- Using the caregiver siderail controls, lower and raise the bed. Fully articulate the bed to test the position sensors.
- Raise the bed, and level the surface.
- Using an angle indicator on the weigh frame, verify the angle between the head end and foot end is less than 3°.
- Using the caregiver siderail controls first and then the pendant, verify proper operation of the electric head and knee functions. Fully articulate the head and knee sections to test the limit switches. Inspect the Line-of-Site® Angle Indicators for physical damage, and verify that their ball bearings are free moving.
- Using the caregiver siderail controls, verify proper operation of the electric foot up and down functions. Fully articulate the foot section to test the limit switches.
- Verify proper operation of the FlexAFoot™ Retractable Foot Mechanism.
- Verify proper operation of the Trendelenburg and Reverse Trendelenburg electric mechanisms. Fully articulate the Trendelenburg and Reverse Trendelenburg electric functions to test the limit switches.
- Verify proper operation of the FullChair® Patient Position Mechanism.
- Using the patient siderail controls, verify proper operation of the electric head and knee functions.
- Press the **Bed Flat** control, and level the bed.
- Press and hold the **Enable** control while pressing the lockout controls. Verify that the lockout lights illuminate.
- Deactivate the lockouts.
- Inspect the siderail extender for damage. Replace if necessary.
- Wipe down the bottom of the sleep surface with a facility-approved disinfectant.

WARNING:
Do not spray cleansers/disinfectants directly onto the bed control switches, which are located on both sides of the siderails. Personal injury or equipment damage could occur.

- Wipe down the right-hand siderails and extender with a facility-approved disinfectant. Inspect for physical damage.
- Wipe down all exposed surfaces with a facility-approved disinfectant. Inspect for physical damage and missing parts.
- Wipe down the lower frame with a facility-approved disinfectant. Inspect for physical damage and missing parts.

Routine Maintenance (Rental Products Only)

Perform the Routine Maintenance (RM) once every 365 days (annually) for the TotalCare® Bariatric Bed. However, if the patient's condition permits or at the caregiver's request, the RM procedure can be performed prior to the 365 days. The RM ensures the unit is disinfected and clean during patient use.

WARNING:
Adhere to the *Infection Control Policies and Procedures* from Hill-Rom. Failure to do so could result in the spread of infection.

1. Obtain the *Service Request Form*.

2. To advise of your expected arrival time, contact the customer. Ask that the customer arrange to remove the patient from the unit during the service time (approximately 15 minutes).

NOTE:
To eliminate confusion and ensure safety, follow the standard procedures for handling and cleaning contaminated materials and equipment. For additional information, refer to the *Exposure Control Plan* and *Infection Control Policies and Procedures* from Hill-Rom.

3. Dispose of the customer linen per the caregiver's instructions.

4. Inspect and clean the sleep surface.

5. Disinfect and inspect the unit's head end.

6. Disinfect and inspect the power cord.

7. Disinfect and inspect patient pendant if present.

8. Inspect the transport handles for damage and proper operation.

9. Verify proper operation of the brake and steer functions.

10. Confirm the IntelliDrive® Transport System engages.

11. Inspect all casters for proper mounting and damage.

12. Disinfect and inspect the patient left side.

13. Raise the patient left siderails and verify proper operation of the locking functions and key/switch functions without disturbing patient.

CAUTION:
The patient cannot be on the bed if checking the HandsFree® Emergency CPR Release Mechanism or the HandsFree® Trendelenburg Release Mechanism. Failure to follow this caution could result in patient discomfort.

14. Verify proper operation of the HandsFree® Emergency CPR Release Mechanism and the HandsFree® Trendelenburg Release Mechanism if patient is not on bed.

15. Disinfect and inspect the foot end.

16. Disinfect and inspect the patient right side.

17. Raise the patient right siderails and verify proper operation of the locking functions and key/switch functions without disturbing patient.

CAUTION:
The patient cannot be on the bed if checking the HandsFree® Emergency CPR Release Mechanism and the HandsFree® Trendelenburg Release Mechanism. Failure to follow this caution could result in patient discomfort.

18. Verify proper operation of the HandsFree® Emergency CPR Release Mechanism and the HandsFree® Trendelenburg Release Mechanism if patient is not on bed.

19. Check the operation of the Graphic Caregiver Interface® (GCI). (Only if patient is not in bed)

20. Access the service menu and check diagnostics for error codes.

21. After you complete all the steps, follow the service location policy to record completion of the RM procedure including:
    a. Complete and sign the form.
    b. Call the completion of the RM into the Customer Care Center.
    c. File the *Service Request Form* in the Equipment Master File.

NOTES:

Chapter 7
Accessories

Chapter Contents

There are no accessories for the TotalCare® Bariatric Bed.

NOTES: